IN THE

Supreme Court of the United States

OCTOBER TERM 1975

Supreme Court, U. S.
FILED
JUN 11 1976
MICHAEL RODAK, JR., CLERK

No. 75-1801

THE STATE OF NORTH CAROLINA
Petitioner,

v.

CHAS. PFIZER & CO., INC., AMERICAN CYANAMID COMPANY, BRISTOL-MYERS COMPANY, OLIN MATHIESON CHEMICAL CORPORATION and THE UPJOHN COMPANY,
Respondents.

APPENDICES TO PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

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APPENDIX A

UNITED STATES COURT OF APPEALS
For The Fourth Circuit

No. 74-2154

THE STATE OF NORTH CAROLINA,

Appellant,

versus

CHAS. PFIZER & CO., INC.,
AMERICAN CYANAMID COMPANY,
BRISTOL-MYERS COMPANY -
OLIN MATHIESON CHEMICAL CORPORATION
and THE UPJOHN COMPANY,

Appellees.

Appeal from the United States District Court for the Eastern District of North Carolina, at Raleigh

This cause came on to be heard on the record from the United States District Court for the Eastern District of North Carolina, and was argued by counsel.

On consideration whereof, It is now here ordered and adjudged by this Court that the judgment of the said District Court appealed from, in this cause, be, and the same is hereby, affirmed.

s/s William K. Slate, II
CLERK

FILED

JAN 12 1976

WILLIAM K. SLATE, II
CLERK

UNITED STATES COURT OF APPEALS
For The Fourth Circuit

No. 74-2154

THE STATE OF NORTH CAROLINA,

Appellant,

versus

CHAS. PFIZER & CO., INC.,
AMERICAN CYANAMID COMPANY,
BRISTOL-MYERS COMPANY -
OLIN MATHIESON CHEMICAL CORPORATION
and THE UPJOHN COMPANY,

Appellees.

Appeal from the United States District Court for the Eastern District of North Carolina, at Raleigh

Argued Jun 10, 1975 Decided Jan 12, 1976

Before RUSSELL, FIELD and WIDENER,
Circuit Judges.

[Names of Counsel Ommitted]

FIELD, Circuit Judge:

Alleging violations of sections 1 and 2 of the Sherman Act, the State of North Carolina instituted this action for damages on behalf of itself, its governmental subdivisions and all citizen consumers who had purchased broad-spectrum antibiotics manufactured and sold by the defendants in North Carolina during the period 1952 to 1966. The defendants are Chas. Pfizer & Co., Inc. (Pfizer), American Cyanamid Company (Cyanamid), Bristol-Myers (Bristol), Olin-Mathieson Chemical Corporation (Squibb), and The Upjohn Company (Upjohn).

The thrust of the plaintiff's case is that Pfizer, aided by Cyanamid, obtained the Conover patent[1] on the antibiotic, tetracycline, by conduct which amounted to a fraud on the Patent Office and thereafter, in combination with the other defendants, exploited it for the purposes

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1. Tetracycline was first identified by Dr. Conover, a Pfizer chemist, and an application for a patent on tetracycline and the production process was filed by Pfizer on behalf of Dr. Conover on Oct 23, 1975. The patent, carrying No.2,699,054, is generally referred to as the Conover patent.

of restraining and monopolizing trade and commerce in the broad-spectrum antibiotic market and particularly the tetracycline market.[1a] The case was tried to the court without a jury, and after an extended trial the district judge filed an opinion containing his findings of fact and conclusions of law.[2] The court concluded that the plaintiff had failed to establish that the defendants had violated the Sherman Act, or that Pfizer was guilty of fraudulent procurement or misuse of the Conover patent. Accordingly, judgment was entered in favor of the defendants and North Carolina has appealed.

North Carolina's appeal presents two issues: (1) Whether the district court erred as a matter of law when it denied the plaintiff's motion for partial summary judgment on the basis of collateral estoppel that Pfizer and Cyanamid had caused the Conover patent to be issued by defrauding the United States Patent Office; and (2) whether the district court's findings of fact were clearly erroneous.

1a. See Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp., 382 U.S. 172 (1965).

2. State of North Carolina v. Chas. Pfizer & Co., Inc., 384 F.Supp. 265 (E.D. N.C. 1974).

The Conover patent has been involved, either directly or indirectly, in extensive litigation commencing with a proceeding before the Federal Trade Commission (Commission) in 1958, and the background of the present controversy has been chronicled in a number of decisions.[3] The relevant facts developed in the district court are as follows. Prior to 1952 three effective and patented broad-spectrum antibiotics were produced and marketed. They were Aureomycin which was produced by Cyanamid and was covered by the Duggar patent, U.S. Patent No. 2,482,055 and the Niedercorn patent, U.S. Patent No.2,609,329; Terramycin

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3. The reported cases are as follows:

United States v. Chas. Pfizer & Co., Inc., et al, 245 F.Supp. 801 (S.D. N.Y. 1965).
American Cyanamid Co.v. F.T.C., 363 F.2d 757 (6 Cir. 1966).
Chas. Pfizer & Co., Inc. v. F.T.C., 401 F.2d 574 (6 Cir. 1968), cert. denied, 394 U.S. 920.
United States v. Chas. Pfizer & Co., Inc., 217 F.Supp. 199 (S.D. N.Y. 1963).
United States v. Chas. Pfizer & Co., 281 F.Supp. 837 (S.D. N.Y. 1968).
United States v. Chas. Pfizer & Co., 426 F.2d 32 (2 Cir. 1970), reh.den., 437 F.2d 957, cert. granted,402 U.S. 548.
United States v. Chas. Pfizer Co., Inc., 367 F.Supp. 91 (S.D. N.Y. 1973).

which was produced by Pfizer and was covered by the Sobin patent, U.S. Patent No. 2,516,080; and Chloromycetin which was patented and produced by Parke-Davis. Parke-Davis is not a party to the present litigation. None of these three manufacturers granted licenses or cross-licenses for these particular drugs. Each of the antibiotics are prescription drugs and their sales are largely dependent upon the physician's opinion of their effectiveness. Since they have a high degree of interchangeability, each manufacturer priced his drugs at a level competitive with the other two producers, thereby creating a stable and parallel price structure, and price reductions by one manufacturer were met by the others during these years.

Prior to 1952, neither the molecular structure of Terramycin nor that of Aureomycin was known, and Dr. Conover, a Pfizer scientist, was a member of a research team which was seeking to determine the structure of Pfizer's Terramycin. In the spring of 1952 the Pfizer team succeeded in ascertaining the structures of both Terramycin and Aureomycin. Shortly thereafter, Dr. Conover discovered that another antibiotic, tetracycline,

could be produced by the application of a deschlorination process to Aureomycin. Pfizer filed the Conover application for a product and process patent on tetracycline in October of 1952, and in March of 1953 Cyanamid filed its Boothe-Morton application for a similar patent. In addition to these two applications, in September of 1953 Heyden Chemical Corporation filed its Minieri application[4] for a patent on tetracycline and the fermentation process for producing it, and in October, 1953, Bristol filed a similar application under the name of Heinemann.

The competing claims of Pfizer and Cyanamid resulted in the declaration of an interference by Herbert J. Lidoff, the Patent Examiner, in December of 1953. While Pfizer believed that it possessed priority of invention, it was aware that its sole method of tetracycline production

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4. Shortly after the filing of the Minieri application, Heyden negotiated the sale of its Antibiotic Division to Cyanamid and on December 1, 1953, Cyanamid took over the assets of Heyden's Antibiotic Division, including the Minieri patent application. Thereafter, Cyanamid abandoned the product claims of the Minieri application but continued to prosecute the process claims. A patent on the Minieri process claim was issued to Cyanamid in February, 1956.

depended upon the application of the deschlorination process to Cyanamid's patented Aureomycin thereby making it wholly dependent upon Cyanamid for its supply of bulk Aureomycin. In an attempt to resolve the question, representatives of the two companies worked out an agreement providing (1) that the parties would exchange proof of priority and that the prevailing party would grant a non-exclusive license to the other in consideration of a fixed royalty; (2) that Cyanamid would grant Pfizer a non-exclusive license to produce Aureomycin for use in tetracycline production; and (3) that Cyanamid would sell to Pfizer an initial quantity of bulk tetracycline so that Pfizer might immediately enter the tetracycline market. After an exchange of proofs relative to the discovery Cyanamid conceded priority to Pfizer and, upon this concession, the Patent Office terminated the interference.

In the meantime, Bristol continued the prosecution of its Heinemann application, and in March of 1954 the Examiner declared a second interference between the Heinemann, Conover and Cyanamid's Minieri applications. The interference proceeding continued until October 14,

1954, on which date the Examiner dissolved the interference, primarily on the ground that tetracycline was unpatentable over the prior art as disclosed in Cyanamid's Duggar and Niedercorn patents because tetracycline, as well as Aureomycin, appeared to be co-produced in fermentation processes disclosed by those two prior patents. Thereafter, in November of 1954 the Examiner issued rejections on all of the claims in the Conover, Minieri and Heinemann applications. Following this dissolution of the second interference Pfizer continued the ex parte prosecution of the Conover application and endeavored to convince Examiner Lidoff that he was in error. Subsequently, Lidoff requested Pfizer to run tests on "Example 28: which was one of the forty-four samples of media contained in the Niedercorn patent. Pfizer conducted the tests to determine whether tetracycline could be recovered from "Example 28" using the recovery procedures described in the Bogert-Walsh,[5] Minieri and Heinemann applications.

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5. The Bogert-Walsh application was filed by Pfizer in April of 1954 and dealt with the separation of tetracycline from chlortetracycline in fermentation broths and other aqueous solutions.

Based upon these tests Pfizer submitted affidavits to the Examiner, reporting that efforts to recover products clearly identifiable as tetracycline from the "Example 28" fermentation broths were unsuccessful. Following the submission of further information by Pfizer, Examiner Lidoff withdrew his previous rejection and allowed the Conover application. The patent on tetracycline and the deschlorination process was issued to Pfizer on January 11, 1955.

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As heretofore stated, the controversy relative to the procurement and use of the Conover patent by Pfizer first surfaced in a proceeding before the Federal Trade Commission in 1958, charging the five defendants in the present case with violations of Section 5 of the Federal

Trade Commission Act, 15 U.S.C. §45.[6] The Commission's complaint alleged, among other things, that Pfizer had made false and misleading statements to the Patent Office for the purpose of inducing the issuance of the Conover patent, and that Cyanamid and Bristol had withheld material information from the Patent Office in the course of the prosecution of their patent applications. It further charged that Pfizer, Cyanamid, Bristol, Squibb and Upjohn had violated the Act by maintaining arbitrary prices through a conspiracy and combination, and by restraining and eliminating competition in the sale of antibiotics. The Hearing Examiner initially found in favor of the drug companies on all issues and dismissed the complaint. However, the Commission reversed the Hearing Examiner and determined that Pfizer and Cyanamid were guilty of a fraud

6. 15 U.S.C. §45 (a)(1): "Unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce, are declared unlawful."

   15 U.S.C. §45 (a)(6): "The Commission is empowered and directed to prevent persons, partnerships, or corporations *** from using unfair methods of competition in commerce and unfair or deceptive acts or practices in commerce."

on the Patent Office and that they, together with Bristol, Squibb and Upjohn, were guilty of price fixing. The Commission issued a cease and desist order with respect to price fixing and, additionally, directed Pfizer to license its tetracycline patent to any domestic applicant on a two and one-half per cent royalty basis. Under identical terms Cyanamid was directed to license its two Aureomycin patents.

The respondent companies filed a petition for review in the Court of Appeals of the Sixth Circuit.[7] After a review of the proceedings in the Patent Office incident to the prosecution of the Conover application, the court stated that "[f]undamental to the Commission's findings of improper conduct on the part of Pfizer and Cyanamid is the question as to what extent previous co-production of tetracycline in Aureomycin broths was material to the issuance of the patent."[8] The court noted that this involved numerous questions concerning the actions and purposes of Examiner Lidoff as representative of the Patent Office,

7. American Cyanamid Company v. F.T.C., 363 F.2d 757 (6 Cir. 1966).

8. Id., at 777.

and concluded that in the absence of his testimony the decision of the Commission on this issue was necessarily based upon inferences and speculation insufficient to constitute substantial evidence. Accordingly, the entire proceeding was remanded to the Commission for a de novo hearing, with directions that the Commission could consider any evidence previously taken as well as any additional evidence relevant to the issues.

Upon the remand, the proceeding was assigned to a new Hearing Examiner and the testimony of Examiner Lidoff and two witnesses for Pfizer was taken. The Hearing Examiner found that representatives of both Pfizer and Cyanamid had made false and misleading statements to the Patent Office which induced the issuance of the Conover patent, and that such conduct constituted an unfair method of competition within the meaning of the Federal Trade Commission Act. The Commission adopted the findings and conclusions of the Hearing Examiner relative to the patent issue, but dismissed the charge of price fixing by an equally divided vote. The Commission's order again required Pfizer and Cyanamid to grant non-discriminatory

licenses under their patents for tetracycline and Aureomycin.

Upon petition for review the Sixth Circuit held that the Commission's findings were supported by substantial evidence and affirmed and enforced its order.[9] The court noted the sharp disagreement between Pfizer's witnesses and Examiner Lidoff with respect to the tests which had been conducted by Pfizer on Niedercorn "Example 28". Pfizer took the position before the Commission (as it did in the present litigation) that Lidoff was interested only in "appreciable" and "recoverable" amounts of tetracycline, but Lidoff testified that he did not consider either the proportion or the amount to be the significant factor. Pfizer further contended that if Lidoff was interested in mere trace amounts, he failed to convey that fact to Pfizer's representatives and, accordingly, they were not guilty of any misrepresentation. The court held, however, that there was substantial evidence to support the conclusion of the Commission that the Patent Office records were sufficient to put both Cyanamid and Pfizer

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9. Charles Pfizer & Co. v. F.T.C., 401 F.2d 574 (6 Cir. 1968).

on notice that Lidoff was interested in ascertaining whether any tetracycline was inherently produced in the Aureomycin broths.[10]

The complaint in the present case was filed in January of 1969, and thereafter the parties engaged in extensive discovery proceedings which focused primarily on the patent aspect of the litigation. In July of 1973, shortly prior to trial, the plaintiff filed a motion for partial summary judgment against Pfizer and Cyanamid on the issue that the Conover patent had been granted as a result of the false and misleading statements which had been made to Patent Examiner Lidoff. The basis for the motion was that this precise factual issue had been previously adjudicated by the Federal Trade Commission in the proceedings hereinabove set forth, and that Pfizer and Cyanamid should be collaterally estopped from relitigating the issue in the present case. In pressing its motion, the plaintiff contended that Blonder-Tongue v.

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10. The review statute, 15 U.S.C. §45(e), provides:

> "The findings of the Commission as to the facts, if supported by evidence, shall be conclusive."

University Foundation, 402 U.S. 313 (1971), had discarded the doctrine of mutuality of estoppel, and that under Zdanok v. Glidden Co., 327 F.2d 944 (2 Cir. 1964), and United States v. United Airlines, Inc., 216 F.Supp. 709 (E.D. Wash. & Nev. 1962), aff'd as to res judicata, sub nom., United Airlines v. Wiener, 335 F.2d 379 (9 Cir. 1964), it was entitled to use the Commission's decision offensively against Pfizer and Cyanamid. The district court, in denying the motion, rejected plaintiff's argument that the doctrine of collateral estoppel as recognized in Blonder-Tongue should be extended to cover its use offensively by an antitrust plaintiff against a patentee.

The question before the Court in Blonder-Tongue was whether the doctrine of mutuality of estoppel which it had applied in Triplett v. Lowell, 297 U.S. 638 (1936), was "a viable rule where a patentee seeks to relitigate the validity of a patent once a federal court has declared it to be invalid."[11] Upon the narrow issue before it the Court concluded "that Triplett should be overruled

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11. 402 U.S. 313, at 327.

to the extent it foreclosed a plea of estoppel by one facing a charge of infringement of a patent that has once been declared invalid."[12] Since the validity vel non of the Conover patent was not directly in issue in the proceedings before the Commission[13] or in the court below, the precise holding of Blonder-Tongue is not dispositive of the question raised by the plaintiff's motion. This is of little moment, however, since the plaintiff's motion should properly be considered in the light of the fundamental change and development of the doctrine of collateral estoppel in the courts which was thoroughly reviewed and analyzed by Mr. Justice White in his opinion in Blonder-Tongue.

The landmark case is, of course, Bernard v. Bank of America Nat. Trust & Savings Assn., 19 Cal.2d 807,

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12. Id., at 350.

13. "The Commission did not undertake to pass upon the validity of the patent nor do we. The order of the Commission treats the patent as valid and requires compulsory licensing. The issue here is a violation of section 5 of the Federal Trade Commission Act, not the validity of a patent." Chas. Pfizer & Co. v. F.T.C., 401 F.2d 574, 586 (6 Cir. 1968).

122 P.2d 892 (1942), in which Justice Traynor rejected the doctrine of mutuality and stated the criteria as follows:

> "In determining the validity of a plea of res judicata three questions are pertinent: Was the issue decided in the prior adjudication identical with the one presented in the action in question? Was there a final judgment on the merits? Was the party against whom the plea is asserted a party or in privity with a party to the prior adjudication?" 19 Cal. 2d, at 813, 122 P.2d, at 895.

In the wake of Bernard, the great majority of the courts, both state and federal, elected to jettison the mutuality requirement, especially where the prior judgment was invoked defensively. This abrogation of mutuality engendered what Mr. Justice White characterized as "mutations in estoppel doctrine" which have resulted in a much more flexible application of this once narrow and restricted concept. Typical of this more liberal approach is Eisel v. Columbia Packing Company, 181 F.Supp. 298, 301 (D.Mass. 1960), where Judge Wyzanski stated:

> "where a plea of collateral estoppel is raised against a plaintiff who had a full trial in a prior action, the decisive question is not whether there is mutuality of estoppel. Nor is the decisive question whether there is technical privity between the second defendant and the first defend-

ant. Instead of such wooden tests, inquiries should be made as to whether plaintiff had a fair opportunity to procedurally, substantively and evidentially to pursue his claim the first time."

This rationale was adopted in our own circuit in Graves v. Associated Transport, Inc., 344 F.2d 894, 900 (1965):

"The courts *** have willingly inquired into the circumstances of the actual case, and time and again they have allowed the plea against a party not having the initiative in the former action whenever they have been satisfied that the party against whom the former judgment was invoked in fact had a realistically full and fair opportunity to litigate the issues in the former action."

Appraised in the light of Eisel and Graves, however, we think the plaintiff's motion was properly denied since, in our opinion, the proceeding before the Commission did not afford Pfizer and Cyanamid a "fair opportunity procedurally, substantively and evidentially" to litigate the issue raised in the present case. First of all, the case before the Commission was an administrative proceeding, not a judicial trial, and while the Sixth Circuit put its imprimatur upon the Commission's determination, the court, acting under the review statute, merely found that there was substantial evidence to support the Com-

mission's conclusions. The issue before the Commission was whether the respondents in that proceeding were guilty of unfair methods of competition in violation of Section 5 of the Federal Trade Commission Act which is a regulatory statute much broader in its scope than the Clayton and Sherman Acts under which the present litigation was instituted. The Commission did not require that the alleged fraud on the Patent Office be demonstrated by clear and convincing evidence[14] and employed evidentiary and procedural rules much more lenient than those incident to a judicial trial. While we are not disposed to hold that an administrative proceeding can never be the basis for a plea of collateral estoppel, we do not think it would be appropriate to accord such effect to the Commission's Section 5 proceeding in the present case.[15]

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14. The parties concede that the "clear and convincing" standard applies to this issue. See Schnadig Corporation v. Gaines Manufacturing Co., Inc., 494 F.2d 383, 393 (6 Cir 1974).

15. In support of its contention that the administrative proceeding is entitled to collateral estippel effect, the plaintiff cites United States v. Willard Tablet Co., 141 F.2d 141 (7 Cir 1944), and United States v. Piuma, 40 F.Supp. 119 (S.D. Cal. 1941). These cases are inapposite since they were merely statutory proceedings in each of which the court simply applied the provisions of 45 U.S.C. 45(g) governing the finality of the Commission's orders.

We agree with the observation of the court in United States v. Chas. Pfizer & Co., 205 F.Supp. 94, 96 (S.D. N.Y. 1962):

> "The legal concepts and issues are quite different. The Federal Trade Commission is regulatory in nature; the Sherman Act is penal as well as civil; the consequences flowing from each Act are quite dissimilar. The proceedings themselves, the rules governing them and the legal principles applicable to each are distinct."

Our conclusion on this point is buttressed by the fact that by the very terms of the Federal Trade Commission Act, proceedings under Section 5 appear to be incompatible with the doctrine of collateral estoppel. Section 5(e)[16] of the Act reads:

> "No order of the Commission or judgment of the court to enforce the same shall in any wise relieve or absolve any person, partnership, or corporation, from any liability under the antitrust acts."

It would be strangely unfair to permit the Government to litigate under the Sherman or Clayton Acts an issue earlier decided against it in a Section 5 proceeding, and at the same time deny to a respondent the right to defend on the same issues in a subsequent antitrust suit brought

16. 15 U.S.C. §45(e).

by a plaintiff who was not even a party to the administrative proceeding. We further note that Section 5(a) of the Clayton Act[17] provides, in effect, that a final judgment or decree rendered in any civil or criminal proceeding brought by or on behalf of the United States under the antitrust laws to the effect that a defendant has violated such laws shall be prima facie evidence against the defendant in any action or proceeding brought by any other party or the United States as to all matters respecting which such judgment or decree would be an estoppel as between the parties thereto. To us it would be paradoxical to accord a Section 5 administrative proceeding the absolute effect of collateral estoppel when a court determination in a criminal action that a defendant had violated the Sherman Act is limited to only prima facie effect. Accordingly, we conclude that the district court acted properly in denying the plaintiff's summary motion.

17. 15 U.S.C. §16(a).

In addition to the collateral estoppel issue the plaintiff urges that the findings of the trial court on the operative issues in this case were clearly erroneous and should be set aside. We are persuaded otherwise.

On the charge of fraud all of the parties focus upon the deposition of the Patent Examiner, Lidoff, and they are in agreement that his testimony was crucial on this point.[18] Lidoff testified that if he had known that tetracycline was inherently co-produced along with Aureomycin in the practice of the Duggar and Niedercorn patents he would have rejected the Conover application. However, he candidly admitted that he could not recall what was actually said in the various

18. Although the district court overruled the defendants' objection to the admissibility of Lidoff's testimony, it recognized that there was a serious question on this point. See United States v. Morgan, 313 U.S. 409 (1941); W.R. Grace & Co. v. Park Manufacturing Company, 378 F.Supp. 976 (E.D. Ill. 1974); cf. American Cyanamid Company v. F.T.C., 363 F.2d 757, 779 (6 Cir. 1966).

interviews incident to the Conover application, and stated the basis of his testimony as follows:

> "[A]nything that I say as having recalled something is really a reconstruction in my mind based on what recent review of the record I have had, which has not been in any detail. So that I cannot say that I positively recall one thing or another. But I can reconstruct what my view would have been at that time."

Upon this basis Lidoff adhered to his position that he considered the presence of any tetracycline in the experimental broths to be significant on the question of patentability. This, of course, was at variance with Pfizer's contention that Lidoff was interested only in the presence of appreciable and recoverable amounts of tetracycline.

Upon this conflict the district court found the record supportive of Pfizer's position. Among other things, an amendment filed in the Patent Office on November 29, 1954, following a meeting with Lidoff stated: "He [Lidoff]*** is not concerned about trace amounts which can be separated from the broths by methods now recommended for recovery of the new antibiotic." The district court further noted that the

presence of some tetracycline in Aureomycin broths was known by scientists at the time the Conover patent was being processed, and was disclosed by documents in patent applications which were then pending before Examiner Lidoff, including a certificate filed by Pfizer's Dr. Bogert. In considering the probative force of Lidoff's testimony, the court also had before it the testimony of four patent experts and several patent attorneys to the effect that prior accidental and unrecognized co-production of trace amounts of tetracycline with Aureomycin would not render Pfizer's claim to tetracycline unpatentable. This testimony supported Pfizer's contention that neither its patent counsel nor Lidoff considered trace amounts of tetracycline significant. Based upon a careful review of the evidence bearing on this issue, the district judge concluded that the plaintiff had failed to establish its charge of fraud on the Patent Office, stating that, at best, it disclosed only a misunderstanding between Pfizer's representatives and Lidoff.

On the charge that the defendants had engaged in a conspiracy to exclude competition and monopolize

the tetracycline market, the plaintiff placed considerable reliance upon the settlement of the patent interference between Pfizer and Cyanamid. The district court's rejection of the plaintiff's contention that this was convincing evidence of conspiratorial conduct is supported by Judge Dobie's observation in Hutzler Bros. Co. v. Sales Affiliates, Inc., 164 F.2d 260 (4 Cir. 1947):

> "We cannot attach, as defendants seem to suggest, any ulterior motives, or any improper conduct, to plaintiffs in connection with the agreed settlement with Bohemen in the interference proceedings. Had the interference proceedings been prosecuted to final judgment, this would have unquestionably delayed the granting of the patent in suit."
> 164 F.2d at 267.

On these issues, as well as the charge of price fixing, the district court found that the actions of the defendants were consistent with the lawful exercise of sound business judgment. The court's review of the pricing policies of the defendants and other drug manufacturers, as well as the trend of market prices during the years in question support its findings on these issues. "The antitrust laws were not meant to

prohibit businessmen from adopting sound business policies merely because competitors had already adopted the same or similar policy."[19]

Upon this appeal "[i]t is not enough that we might give the facts another construction, resolve the ambiguities differently and find a more sinister cast to actions which the district court apparently deemed innocent. *** We are not given those choices because our mandate is not to set aside findings of fact 'unless clearly erroneous'." United States v. Real Estate Boards, 339 U.S. 485, 495 (1950). Since we conclude that the findings of the district judge were not clearly erroneous, the judgment below is affirmed.

A F F I R M E D

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19. Independent Iron Works, Inc., v. United States Steel Corp., 177 F.Supp. 743, 747 (N.D. Cal. 1959), aff'd 322 F.2d 656 (9 Cir. 1963), cert. denied, 375 U.S. 922 (1963).

UNITED STATES COURT OF APPEALS
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No. 74-2154

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BRISTOL-MYERS COMPANY -
OLIN MATHIESON CHEMICAL CORPORATION
and THE UPJOHN COMPANY,

Appellees.

Appeal from the United States District Court for the Eastern District of North Carolina, at Raleigh

Upon consideration of the appellant's motion to extend the time to file a petition for rehearing and suggestion for rehearing en banc to February 26, 1976, by counsel,

IT IS ORDERED that the motion is granted.

FILED

JAN 27 1976

WILLIAM K. SLATE, II
CLERK

FOR THE COURT - BY DIRECTION

s/s William K. Slate, II
CLERK

UNITED STATES COURT OF APPEALS
For The Fourth Circuit

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THE STATE OF NORTH CAROLINA,

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Appellees.

Appeal from the United States District Court for the Eastern District of North Carolina, at Raleigh

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O R D E R

Upon consideration of the Petition for Rehearing and Suggestion for Rehearing in banc filed on February 26, 1976, by the appellant, The State of North Carolina;

Now, therefore, with the concurrence and approval of the other members of the panel and in the absence of a request for a poll

of the entire court, as provided by Appellate Rule 35(b),

It is ADJUDGED and ORDERED that the petition for rehearing is denied.

s/s John A. Field, Jr.
United States Circuit Judge

FILED

MAR 15 1976
WILLIAM K. SLATE, II
CLERK

UNITED STATES COURT OF APPEALS
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Appeal from the United States District Court for the Eastern District of North Carolina, at Raleigh

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Upon motion of the appellant, by counsel and for cause shown,

IT IS ORDERED that the mandate in the above-entitled case be, and it is hereby, stayed pending application of the appellant in the Supreme Court of the United States for a writ of certiorari to this Court, provided the application is filed

within the time permitted by law.

For the Court - by Direction.

/s/ William K. Slate, II
CLERK

FILED

MAR 18 1976

WILLIAM K. SLATE, II
CLERK

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
RALEIGH DIVISION

THE STATE OF NORTH CAROLINA, Plaintiff vs. CHAS. PFIZER & CO., INC., AMERICAN CYANAMID COMPANY, BRISTOL-MYERS COMPANY, OLIN MATHIESON CHEMICAL CORPORATION and THE UPJOHN COMPANY, Defendants	)	CIVIL NO. 2287

* * * * * * * * * * * * * * * * * * * *

PLAINTIFF'S FIRST AMENDED COMPLAINT

* * * * * * * * * * * * * * * * * * * *

By leave of Court, plaintiff files its first amended complaint as follows:

* * * *

18. The foregoing monopoly, conspiracy to monopolize, attempt to monopolize, and combination, conspiracy, and agreement in restraint of interstate and foreign trade and commerce was carried on and consummated by the following means and methods, among others:

A. Cyanamid licensed Pfizer and Bristol to use

its Aureomycin patent in the manufacture of Tetracycline and refused to license all other applicants in the United States.

B. Pfizer licensed Cyanamid and Bristol under its Tetracycline patent and refused to license all other applicants in the United States.

C. Cyanamid assisted and cooperated with Pfizer in obtaining for Pfizer a patent on Tetracycline by deliberately making false statements to, and deliberately withholding material information from, the Patent Office as the presence of Tetracycline in Chlortetracycline (Aureomycin).

D. Pfizer, Cyanamid, and Bristol suppressed litigation involving the validity of Pfizer's Tetracycline patent.

E. Pfizer and Cyanamid and Bristol withheld pertinent and material information from the Patent Office and otherwise misled the Patent Office prior to the issuance of Pfizer's Tetracycline patent.

F. Cyanamid acquired a competing patent application on Tetracycline and abandoned the product claim therein.

G. Bristol sold bulk Tetracycline in the United States only to Upjohn and Squibb. Pfizer, Cyanamid, and Bristol refused to sell bulk Tetracycline to all others in the United States except that Cyanamid sold a large amount of bulk Tetracycline to Pfizer in early 1954 in assisting Pfizer to make a prompt entry into the Tetracycline product market.

H. Bristol entered into agreements with Upjohn and Squibb respectively which required Upjohn and Squibb to purchase all their United States requirements of bulk Tetracycline from Bristol.

I. Pfizer issed licenses to Upjohn and Squibb, respectively, limited at Bristol's request, to the sale of Tetracycline products.

J. Pfizer and Cyanamid maintained substantially identical, non-competitive and unreasonably high prices on Terramycin products and Aureomycin products, respectively.

K. Pfizer, Cyanamid, Bristol, Upjohn and Squibb each introduced its Tetracycline products on the market at unreasonably high prices substantially identical with each other and with Aureomycin and Terramycin products and maintained such unrea-

sonably high, substantially identical and non-competitive prices.

L. Pfizer, Cyanamid, Bristol, Upjohn and Squibb each introduced its Tetracycline products on the market in dosage forms and customer classifications substantially identical with the Terramycin product and Aureomycin product dosage forms and customer classifications in effect as of November 1953, and for somet me thereafter contined [sic] to use each substantially identical dosage forms and classifications.

M. U. S. Patent Number 2,699,054 (The Conover Patent on the product tetracycline) was in fact procured by knowing and willful fraud practiced by defendants Pfizer and Cyanamid on the Patent Office by the following methods and means, among others:

(1) Both Pfizer's and Cyanamid's duly authorized representatives, acting within the course and scope of the authority of their offices and duties in prosecuting each of their respective company's applications for a patent on tetracycline during the period July, 1953, through January 11, 1955, did misrepresent

facts to, and conceal facts from the U. S. Patent Office in that each:

(a) Affirmatively made representations of facts regarding inherent coproduction of tetracycline with the production of chlortetracycline, to wit: that tetracycline was not inherently coproduced with the production of chlortetracycline when they were aware or should have been aware that, in truth and fact, tetracycline was inherently coproduced with the production of chlortetracycline.

(b) Ignoring their duty to disclose, they withheld and concealed facts in their possession regarding the inherent coproduction of tetracycline with the production of chlortetracycline, to wit: defendants positively knew that tetracycline was inherently coproduced with the production of chlortetracycline and proof of such facts was in their possession during the period October, 1953 through January 11, 1955.

(c) Affirmatively made representations of fact that tetracycline was not present in

chlortetracycline products which had been sold in commerce for more than one year prior to either of Pfizer's or Cyanamid's applications for a patent on the product tetracycline, when in truth and fact each knew of the presence of tetracycline in chlortetracycline products which had been sold in commerce for more than a year prior to either of Pfizer's or Cyanamid's said applications.

(d) Ignoring their duty to disclose, they withheld and concealed facts in their possession that tetracycline was present in chlortetracycline products which had been sold in commerce more than one year prior to either of Pfizer's or Cyanamid's application for a patent on tetracycline.

(2) The misrepresented facts, and those facts which were concealed, were material to the Patent Examiner in his consideration and determination of the patentability of the product tetracycline.

(3) The misrepresentations of facts were made with knowledge of their falsity or in culpable

ignorance of the truth of the statements made; and the acts of concealing those facts which were not disclosed were done with knowledge of the erroneous conclusions of fact to be drawn by one without knowledge of such facts.

(4) The misrepresentations of the facts made, and the concealing of those facts which were concealed, were done with the intent that the misrepresented facts and the absence of the facts concealed should be relied upon by the Patent Examiner in his consideration and determination of the patentability of the product tetracycline.

(5) The Patent Examiner did rely upon the misrepresentations of facts and the absence of the facts concealed by Pfizer and Cyanamid in his consideration and determination of the patentability of the product tetracycline.

(6) The reliance by the Patent Examiner upon the misrepresented facts and the absence of the facts concealed by Pfizer and Cyanamid was the operative cause of the Patent Examiner to have the U. S. Patent Office issue a patent on the product tetracycline to Pfizer, which other-

wise he would not have done.

(7) Pfizer enforced a monopoly power through its patent number 2,699,054 to the injury of plaintiff and continued to assert such power at least until the fall of 1966.

Plaintiff asserts a plea of collateral estoppel against defendants Pfizer and Cyanamid as a bar against their denying the foregoing allegations on the ground the same have been previously fully, fairly and finally adjudicated in FTC Dkt. #7211 and affirmed on appeal as reported in 401 F. 2d 574 (6th Cir. 1968), cert. denied, 394 U.S. 920 (1969).

N. Defendant Pfizer enforced the aforesaid patent with knowledge of the fraudulent manner in which it was acquired and through numerous legal actions instituted under the Conover patent suppressed competition in the production and marketing of Tetracycline and all of the entire broad spectrum antibiotics, thereby violating the Sherman Act as amended by the Clayton Act.

O. Defendants Cyanamid, Bristol, Squibb, and Upjohn accepted licenses under the Conover patent with knowledge of the fraudulent manner in which it was obtained and enforced the said patent and

licenses thereby suppressing competition in the production and marketing of Tetracycline and all other broad spectrum antibiotics, thereby violating the Sherman Act as amended by the Clayton Act.

* * * *

This the 5th day of October, 1973.

ROBERT MORGAN
Attorney General of North Carolina

/s/ Jean A. Benoy

Jean A. Benoy
Deputy Attorney General
N. C. Department of Justice
P. O. Box 629
Raleigh, North Carolina 27602
Telephone: (919) 829-3786

Dated: October 5, 1973

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
RALEIGH DIVISION

STATE OF NORTH CAROLINA, :

Plaintiff, :

v. : CIVIL NO. 2287

CHAS. PFIZER & CO., INC., AMERICAN CYANAMID COMPANY, BRISTOL-MYERS COMPANY, OLIN MATHIESON CHEMICAL CORPORATION, and THE UPJOHN COMPANY, :

Defendants. :

PRE-TRIAL CONFERENCE AND

MOTIONS HEARD BEFORE

HONORABLE FRANKLIN T. DUPREE, JR.,

U. S. DISTRICT JUDGE

AT RALEIGH

JULY 24, 1973

* * * *

That leaves plaintiff's motion for partial summary judgment and as to that, in the absence of more definite authority on the offensive use of the doctrine of collateral estoppel in the context of an FTC proceeding or of an administrative agency, except where there may be some statute or rule which would make a difference, that I should apply it in this case. Here again, I think this question might very well be the subject of substantial difference of opinion and I would make a certification under Sec. 1292(b) with respect to this question, too.

* * * *

C E R T I F I C A T E

I, Elizabeth Overby, Official Court Reporter, hereby certify that I reported and transcribed the hearing held in the above-captioned cause on July 24, 1973, at Raleigh, and that the foregoing 192 pages are a true and accurate transcript thereof.

This July 30, 1973:

s/s Elizabeth Overby
Official Court Reporter

P.O. Box 30101
Raleigh, N. C. 27612

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
RALEIGH DIVISION

THE STATE OF NORTH CAROLINA, Plaintiff	)	CIVIL NO. 2287
vs.	)	ORDER ON FINAL PRE-TRIAL CONFERENCE and RULINGS ON MOTIONS
CHAS. PFIZER & CO., INC., AMERICAN CYANAMID COMPANY, et al., Defendants	)	

At the final pre-trial conference held on July 24, 1973, action was taken and rulings were made as follows:

* * * *

5. Plaintiff's motion for partial summary judgment against defendants Pfizer and Cyanamid on the question of the alleged fraud of these defendants in the procurement of U. S. Patent No. 2,699,054 (the Conover patent on the product Tetracycline) is denied.

6. The court is of opinion that this order with respect to the rulings on the foregoing motions of the defendants relating to standing and consumer class action and the motion of the plaintiff for partial summary judgment involve controlling ques-

tions of law as to which there is substantial ground for difference of opinion, and an immediate appeal from this order may materially advance the ultimate termination of this litigation. Unless so ordered by the Court of Appeals or a judge thereof, however, an application for an appeal from this order shall not stay the trial of this action presently scheduled to commence on July 30, 1973.

* * * *

F. T. DUPREE, JR.
UNITED STATES DISTRICT JUDGE

July 25, 1973.

In Re Coordinated Pretrial Proceedings in Antibiotic Antitrust Actions.

U. S. District Court, Southern District of New York. M19-93A and the following actions: All cases. Filed August 2, 1971.

Opinion and Order Applicability of Sections 5(a) and 5(b) of the Clayton Act.

Lord, D. J.: The questions now before the Court concern the effect of the Government's prior proceedings against these defendants[1] on the present private treble damage actions. More specifically, the questions are whether, pursuant to §5(b) of the Clayton Act, 15 U.S.C. §16(b)[2] the prior proceedings tolled the running of the four-year statute of limitations, §4B of the Clayton Act, 15 U.S.C. §15b, and whether, pursuant to §5(a) of the Clayton Act, 15 U.S.C. §16(a)[3], the judgment in one of those proceedings is entitled to prima facie effect in these actions.

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[1] The defendants are the American Cyanamid Co., Bristol-Myers Co., Pfizer, Inc., Squibb Beech-Nut, Inc. and Olin Corp., and The Upjohn Co.

[2] Section 5(b) states:

Whenever any civil or criminal proceeding is instituted by the United States to prevent, restrain, or punish violations of any of the anti-trust laws, but not including an action under section 15a of this title, the running of the statute of limitations in respect of every private right of action arising under said laws and based in whole or in part on any matter complained of in said proceeding shall be suspended

during the pendency thereof and for one year thereafter: Provided, however, That whenever the running of the statute of limitations in respect of a cause of action arising under section 15 of this title is suspended hereunder any action to enforce such cause of action shall be forever barred unless commenced either within the period or suspension or within four years after the cause of action accrued.

[3]Section 5(a) states:

A final judgment or decree heretofore or hereafter rendered in any civil or criminal proceeding brought by or on behalf of the United States under the antitrust laws to the effect that a defendant has violated said laws shall be prima facie evidence against such defendant in any action or proceeding brought by any other party against such defendant under said laws or by the United States under section 15a of this title, as to all matters respecting which said judgment or decree would be an estoppel as between the parties thereto: Provided, That this section shall not apply to consent judgments or decress entered before any testimony has been taken or to judgments or decrees entered in actions under section 5a of this title.

The decision of these questions requires a familiarity with the facts of the prior proceedings. After initial studies of one defendant's pricing policies on a specific product[4] and of the antibiotic industry in genera, the Federal Trade Commission issued a complaint on July 28, 1958, charging all five of the defendants with violations of Section 5 of the Federal Trade Commission Act, 15 U.S.C. §45, in connection with the sale of antibiotics. The Commission's initial decision finding all five defendants to have violated §5 was reversed on appeal. AMERICAN CYANAMID CO. v FTC [1966 Trade Cases ¶71,307], 363 F 2d 757 (6th Cir. 1966). On remand, the Commission found that two of the defendants, Pfizer and Cyanamid, had violated Section 5 and this result was affirmed by the Court of Appeals for the Sixth Circuit. CHAS. PFIZER & CO. v FPC [1968 Trade Cases ¶72,580]. 401 F. 2d 574 (6th Cir. 1968.

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[4] The Commission investigated Pfizer's pricing policies on Terramycin from 1951 to 1955 and conducted an investigation of the antibiotics industry which resulted in an "Economic Report on Antibiotics Manufacture", issued in June of 1958

In the meantime an indictment was returned on August 17, 1961 against three of these defendants,[5] naming the other two as co-conspirators, charging violations of sections 1 and 2 of the Sherman Act, 15 U.S.C. §§1, 2. After trial to a jury, the verdict of guilty on all counts as to all three defendants was reversed on appeal, UNITED STATES v PFIZER [1970 Trade Cases ¶73,149], 426 F. 2d 32, modified [1971 Trade Cases ¶73,405], ____F. 2d _____ (2d Cir. 1970). Certiorari has now been granted. UNITED STATES v CHAS. PFIZER & CO., 39 U.S.L.W. 3486 (April 26, 1971).

I

Tolling of the Statute

The defendants apparently concede that in all cases but the farm cases and the foreign cases,[6] which they contend are not based on the prior Government actions, the statute of limitations was tolled by the

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5 American Cyanamid, Pfizer and Bristol-Myers.

6 By the term "farm" cases, the Court understands the defendants to be referring to those cases in which claims arising from the purchase of broad spectrum antibiotics for non-human use are asserted. These claims are now presented within the framework of three separate class actions: MIDWEST VETERINARY SUPPLY, INC. v AMERICAN CYANAMID CO., 69 Civ. 1558 (purchasers of broad spectrum antibiotics for nonhuman use

directly from defendants or in the same form as originally sold by defendants). By the term "foreign cases", the Court understands the defendants to be referring to two actions: REPUBLIC OV VIET NAM v CHAS. PFIZER & CO., 70 Civ. 877; STATE OR KUWAIT v CHAS PFIZER & CO. 69 Civ. 4091. The fact that certain other cases, such as the actions by seven states and the competitor cases, may assert foreign or farm claims gives further support to the court's reading of the plaintiff's Pretrial Brief, advanced infra.

institution of the criminal action in 1961 They contend, however, that the earlier FTC proceeding could not and did not toll the statute in any case.

A. THE FTC PROCEEDINGS

The defendants argue that since the prior FTC proceeding in this case was pursuant to § 5 of the FTC Act and since that section is not one of the "antitrust laws" as defined by § 1 of the Clayton Act, 15 U.S.C. § 12, Nashville Milk Co. v. Carnation Co. [1958 TRADE CASES ¶68,915], 355 U.S. 373, 375-76 (1958), the proceeding does not satisfy the requirements of § 5(b).

Defendants' argument ignores the fact that § 5(b), unlike § 5(a), does not require that the prior action be one "under the antitrust laws," only that it be one "to prevent, restrain or punish violations of any of the antitrust laws. . ." Influenced by this statutory language, two of the three courts facing this precise question have held the statute tolled by FTC proceedings under § 5 of the FTC Act where the purpose of those proceedings was "to prevent, restrain, or punish" violations of the antitrust laws. Rader v. Balfour [1971] TRADE CASES ¶73,521], 440 F. 2d 469 (7th Cir. 1971); Lippa's Inc v. Lenox, Inc. [1969 TRADE CASES ¶72,955], 305 F. Supp. 182 (D. Vt. 1969), contra, Laitram Corp. v. Deepsouth Packing Co. [1968 TRADE CASES ¶72,367], 279 F. Supp. 883 (E. D. La. 1968).

It is well-established that § 5 of the FTC Act includes within its terms a wide

variety of conduct, including conduct condemned by §§1 and 2 of the Sherman Act, 15 U.S.C. §§1, 2, TIMES-PICAYUNE PUB. CO. v UNITED STATES [1953 Trade Cases ¶67,494], 345 U.S. 594 (1953); FTC v CEMENT INSTITUTE [1948-1949 Trade Cases ¶62,237], 333 U.S. 683 (1948). And it would be as arbitrary, in terms of the statutory policy of §5(b), to hold that the tolling effect of a prior Government action turned on the statute under which it was initiated as it would be to hold that tolling depended upon the agency which initiated the action. MINNESOTA MINING & MFG. CO. v NEW JERSEY WOOD FINISHING CO. [1965 Trade Cases ¶71,449], 381 U.S. 311, 320-22 (1965). Although the Supreme Court was not faced with this problem in 3M since the FTC action was pursuant to §7 of the Clayton Act, 15 U.S.C. §18, its logic in holding that FTC proceedings, as well as action initiated by the Justice Department, could toll the statute supports that result reached here.

The determinative factor in each case, then, is the type of conduct against which the proceeding is aimed. As was stated in RADER v BALFOUR, SUPRA at 473, a §5 FTC Act proceeding "suspends the running of the statute of limitations if the proceeding is directed at alleged conduct which appears to involve an existing or incipient violation of the antitrust laws." And the character of the earlier proceeding must be resolved by an examination of the FTC complaint. Turning to the earlier complaint against these defendants, a reading of its allegations clearly establishes that the defendants were charged with conduct violative of the antitrust laws[7]

[7] Paragraphs 7,8,9 and 10 of the complaint,

and that the proceeding therefore met the requirements of §5(b).

B. The Farm and Foreign Cases

As earlier stated, the defendants argue that the running of the statute was not tolled in the farm and foreign cases because they are not "based in whole or in part on any matter complained of" in the prior proceedings.[8] It is settled that the proper method for determining this question, at least initially, see RADER v BALFOUR, SUPRA at 473, is to compare the allegations of the Government and private complaints. LEH v GENERAL PETROLEUM CORP. [1965 Trade Cases ¶71,593[, 382 U.S. 54, 65 (1965). And for purposes of deciding this question, the court will consider the "Preliminary Pretrial Brief" submitted by the Plaintiff's National Steering Committee as a pleading

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7 Cont. attached to the opinion as Appendix A, allege the fradulent procurement of the Conover Patent, the restraint of trade in antibiotics and the monopolization of that industry.

[8]The defendants have not contended, and the Court does not understand them to contend, that the cases other than the farm and foreign cases are not based on the prior proceedings.

amending the original complaints.

The defendants contend that the farm and foreign cases involve markets and, to some extent, products not included in the prior proceedings. For example, both the FTC complaint and the criminal indictment are said to speak only of broad spectrum antibiotics for domestic human use. And relying on later findings and opinions in the FTC action and the development of the evidence at the criminal trial, the defendants argue that the focus of those proceedings was on tetracycline, a product manufactured predominantly for human use. Defendants also note that the sale of

these products in foreign commerce was investigated by a separate grand jury almost three years after the return of the initial indictment and that no[9] action was ever taken by that grand jury.

Accepting the defendants' characterization of the FTC complaint and the criminal indictment, the essence of their argument is that the Government alleged antitrust violations only in the domestic human consumption market while the farm and foreign plaintiffs allege conspiracies only in the farm and foreign markets respectively.

A reading of the Plaintiffs' Prelimi-Pretrial Brief, however, indicates that the plaintiffs' theory of liability cannot be so neatly compartmentalized into foreign and domestic, human and agricultural markets. That brief alleges conspiratorial antitrust violations broader in scope than those alleged by the Government - violations which affected both the farm and human markets and had both domestic and international implications. In fact, the brief alleges a necessary interrelationship between these different aspects of the alleged conspiracy. For example, the plaintiffs allege that one

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9The defendants advance the additional argument that the original complaints in these cases, which admittedly track the criminal indictment, evidence a "sham" reliance on the prior proceedings and should be disregarded. Leh v. General Petroleum Corp., supra at 59. Because the Court interprets the Plaintiffs' Preliminary Pretrial Brief as an amendment to these complaints and because the Court has concluded that the actions,

of the preconditions to the entry of Bristol, Squibb and Upjohn into the conspiracy in all other markets was their agreement to refrain from the sale of broad spectrum antibiotics in the farm market.

Each plaintiff, then, is alleging broader violations of the antitrust laws than did the Government and the question is whether they may still claim to be basing their actions on the prior proceedings. Although a treble damage plaintiff usually chooses to incorporate only a part of the Government case into his complaint, see, e.g., Leh v. General Petroleum Corp., supra, there is no logical reason why tolling should not also follow where the plaintiff incorporates the entire Government case and alleges more in addition. In both instances the overlap between the Government case and the private allegations suggests that valuable practical benefits may flow to the private plaintiff from tolling the statute. Cf. Zenith Radio Corp. v. Hazeltine Research, Inc. (1971 Trade Cases ¶ 73,484), - U.S. - (Feb. 24, 1971). The Court therefore concludes that the farm and foreign cases, like all other cases now before the Court, are based in whole or part on the prior FTC and criminal action.

The conclusion reached here is in no way inconsistent with the results reached in the two cases cited by defendants. Peto v. Madison Square Garden Corp. (1961 Trade Cases ¶ 72,257), 384 F. 682 (2d Cir.

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interpreted in this manner, are based on the prior proceedings, it is unnecessary to consider this argument.

1967); 2361 State Corp. v. Sealy, Inc. (1967 Trade Cases ¶ 72,063), 263 F. Supp. 845 (N. D. Ill. 1967). In Peto the plaintiff alleged monopolization of the professional hockey industry by the defendants and claimed the tolling of the statute of limitations because of a prior Government action, United States v. Int'l Boxing Club of N. Y., 150 F. Supp. 396, aff'd, 358 U. S. 242 (1959). The Second Circuit rejected this claim stating that a comparison of the claims asserted in the two cases showed that different conspiracies were referred to, involving different sports and covering different periods of time. In the present case the Plaintiffs' Pretrial Brief indicates that the same conspiracies are alleged in the Government and private cases are concerned with the world-wide effect of the alleged conspiracy in both human and agricultural markets.

In 2361 State Corp. v. Scaly, Inc., the plaintiff, a mattress manufacturer who had formerly sold to Ward on a local basis, alleged a conspiracy between Ward and Sealy to prevent manufacturers, other than participants in Sealy's National Accounts Program, from selling to Ward. The district court, sua sponte, considered the applicability of § 5(b) to the case in light of a prior Government suit challenging certain territorial and pricing restriction found in licensing agreements between Sealy and its licensors. The court noted that the National Accounts Program assailed by plaintiff operated "in much the same fashion" as the license agreements attacked by the Government. And, significantly for the present case, the court there stated

that if plaintiff were claiming injury by operation of that program, "Section 5(b) would operate to suspend the statute of limitations because there is substantial identity in operation and effect between the Sealy trademark licensing program and its national accounts program." Id. at 851-52. However, plaintiff's theory of liability did not claim injury by this program and it was, therefore, not

entitled to the tolling effect of § 5(b). In the present case, plaintiffs' theory of liability would seem to meet the test which the plaintiff in 2361 State Corp. failed. They allege a conspiracy similar in nature and operation to that alleged in the earlier Government actions but they allege that its effect was not limited to the domestic human consumption market but extended around the world and into the agricultural market as well. The Court must conclude that these private actions, including the farm and foreign cases, are based on the prior Government proceedings and that the statute of limitations was, therefore, tolled by the institution of the FTC action in 1958 and by the return of the criminal indictment in 1961.

II

Prima Facie Effect of the FTC Judgment

The second major question before the Court is whether, under § 5(a) of the Clayton Act, 15 U. S. C. § 16(a), the findings and order of the FTC Act, 15 U. S. C. § 45, are entitled to prima facie effect in these treble-damage actions.[10] The Court has concluded that they are not because the FTC proceeding was not one "under the antitrust laws," as required by § 5 (b).

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[10] The parties have not argued and the Court

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does not pass on the applicability of the doctrine of collateral estoppel to these cases. See, Purex Corp., Ltd. v. Proctor & Gamble Co. [1970 TRADE CASES ¶ 73,178], 308 F. Supp. 584, 589-90 (C. D. Cal. 1970). In an amicus brief, counsel for certain hospital patients seeking intervention in the state class actions argues that § 5 (c) of the FTC Act, 15 U. S. C. § 45(a) gives the findings of the FTC conclusive effect in these actions. The Court can find no support for this assertion in the legislative history or case law and rejects it without further discussion.

sections are "governed by different considerations as well as congressional policy objectives." Id. at 318. § 5(a) is the more limited of the two, granting prima facie effect in private actions to a limited category of judgments or decrees in prior Government actions and only to the extent the judgment or decree would be "an estoppel as between the parties" to the prior action.

The crucial difference between § 5(a) and § 5(b) in the present context is the statutory language noted earlier. § 5(b) requires only that the prioer action be one "to prevent, restrain or punish violations of any of the antitrust laws ..." while § 5 (a) imposes the stricter requirement that the judgment or decree be rendered in a Government proceeding "under the antitrust laws to the effect that a defendant has violated said laws..." It is this Court's conclusion that while the FTC proceeding under § 5 of the FTC Act relied on by plaintiffs was an action to prevent, restrain or punish violations of the antitrust laws, it cannot be characterized as a proceeding "under the antitrust laws" for purposes of § 5(b) of the Clayton Act. See Nashville Milk Co. v. Carnation Co., supra.

Although plaintiffs have failed to cite them, the few cases dealing with this precise issue have also denied prima facie effect to the results to FTC proceedings under § 5 of the FTC Act. Y & Y Popcorn Supply Co. v. ABC Vending Corp. [1967 TRADE CASES ¶ 72,022], 263 F. Supp. 709 (E.D. Pa. 1967); Proper v. John Bene & Sons, Inc., 295 F. 729 (E.D.N.Y. 1923). And the cases

on by plaintiffs are distinguishable from the present case. In Farmington Dowel Products Co. v. Forster Mfg. Co. [1970 TRADE CASES ¶ 73,075], 321 F. 2d 61 (1st Cir. 1970), the Court held an FTC order under §2 (a) of the Clayton Act entitled to prima facie effect, observing that unlike the situation in Proper v. John Bene & Sons, Inc., supra, the FTC proceeding in its case was under the Clayton Act "which is clearly an 'antitrust law.'" Id. at 67, n. 7. And see, Rader v. Balfour, supra; Purex Corp., Ltd. v. Procter & Gamble, supra; Lippa's, Inc. v. Lenox, Inc., supra.

Appendix A

"PARAGRAPH SEVEN: Respondent Pfizer has in the past and is now engaging in unfair methods of competition and unfair acts and practices in commerce, in connection with the production and sale of antibiotics in that Pfizer has done and performed the following acts and practices:

***

(c) Attempted to monopolize the antibiotics industry;

(d) Attempted to monopolize and has monopolized the tetracycline industry;

(e) Made false, misleading and incorrect statements to the United States Patent Office with the purpose and effect of inducing the United States Patent Office to grant United States Letters Patent No. 2,699,054;

(f) Caused United States Letters Patent No. 2,699,054 to be issued as a result of misrepresentations advanced by Pfizer on behalf of the applicant for the patent;

* * *

(m) Issued invalid licenses under United States Letters Patent No. 2,699,054.

PARAGRAPH EIGHT: The acts and practices of the respondent Pfizer, as herein alleged, have had and do have the effect of hindering, lessening, restricting, restraining and eliminating competition in the sale of antibiotics; have had and do have a dangerous tendency to unduly hinder competition or to create in respondent a monopoly; have constituted an attempt to monopolize and have foreclosed markets and access to markets to competitors in in the sale and distribution of antibiotics; are all to the prejudice of competitors of respondent and to the public; and constitute each and all unfair methods of competition and unfair acts and practices in commerce within the intent and meaning of the Federal Trade Commission Act.

PARAGRAPH NINE: For many years, and continuing to the present time, each and all of the respondents named herein have engaged in unfair methods of competition and unfair acts and practices in commerce in the manufacture, sale and distribution of tetracycline, chlortetracycline and oxytetracycline in that they have, through conspiracy, combination, agreement, and planned common courses of action, and as a part thereof, done and performed the

following:

(a) Fixed and maintained arbitrary, artificial, non-competitive and rigid prices;

(b) Fixed prices;

(c) Fixed and maintained prices, terms and conditions of sale;

(d) Policed and enforced the illegally fixed prices;

(e) Established and maintained illegal resale price maintenance agreements;

(f) Established and maintained agreements to license and cross license, and established and maintained licenses and cross licenses under patents with the purpose and effect of unreasonably foreclosing and preventing competition in the production and sale of tetracycline and chlortetracycline;

(g) Unreasonably foreclosed access to substantial markets to competitors and potential competitors;

(h) Denied to competitors and potential competitors a reasonable opportunity to compete;

(i) Attempted to monopolize the antibiotics industry;

(j) Attempted to monopolize and have monopolized the manufacture, sale and distribution of tetracycline;

(k) Pfizer, Bristol and Cyanamid withheld from the United States Patent Office

material and probative information and material in connection with the filing and prosecution of patent applications, as a result of which Pfizer was enabled to procure United States Letters Patent No. 2,699,054 on tetracycline;

* * *

(m) Cyanamid, Bristol, Olin Mathieson and Upjohn solicited and accepted and Pfizer issued licenses under United States Letters Patent No. 2,699,054 with knowledge that:

1. Material and probative information and material were withheld from the United States Patent Office by one or more of the applicants for said patent prior to, during and after interference proceedings before the United States Patent Office.

2. Pfizer submitted false, misleading and incorrect information to the United States Patent Office in support of its application for said patent.

3. There was no real invention or novelty in the claims of said patent.

4. The claims of said patent disclosed no patentable invention in view of the prior state of the art at the time the initial application therefor was filed.

5. The alleged invention was made known or used by others in this country before the alleged invention by the applicant (Conover).

6. The alleged invention was in public use and/or on sale in this country more than one year prior to the filing of the

application for said patent.

7. The subject of the patent was obvious, at the time of the filing of the respective applications for the patent, to anyone having ordinary skill in the art.

PARAGRAPH TEN: The acts and practices of the respondents, as herein alleged, have had and do have the effect of hindering, lessening, restricting, restraining and eliminating competition in the sale of antibiotics; have had and do have a dangerous tendency to unduly hinder competition or to create in respondents a monopoly; have constituted an attempt to monopolize; have foreclosed markets and access to markets to competitors in the sale and distribution of antibiotics; [illegible]e all to the prejudice of competitors of respondents and to the public; and constitute unfair methods of competition and unfair acts and practices in commerce within the intent and meaning of the Federal Trade Commission Act...."

PFIZER INC., ET.AL, Defendants-Petitioners,

v.

Honorable Miles W. LORD, United States District Judge, Respondent,
and
State of Kansas and Named Plaintiffs in Forty-Eight Other Cases, Plaintiffs-Respondents.

No. 71-1581.

United States Court of Appeals,
Eighth Circuit.
Feb. 15, 1972.

* * * *

[LIST OF COUNSEL OMITTED]

* * * *

Before MATTHES, Chief Judge, and BRIGHT and ROSS, Circuit Judges.

PER CURIAM.

We have for consideration a petition, filed by defendants in these cases, seeking a writ of mandamus directing the Honorable Miles W. Lord, United States District Judge for the District of Minnesota, before whom these actions are pending, to vacate and rescind Discovery Order No. 71-15, filed October 1, 1971, sub nom. In re Coordinated Pretrial Proceedings in Antibiotic Antitrust Actions, 4-71 Civ. 435. Pursuant to Fed. R. App. P. 21, respondent Lord and the plaintiffs-respondents were authorized to answer or otherwise respond to the petition. Judge Lord declined to file any response, but answers were filed by or on behalf of all

plaintiffs.[1]

I

We begin with a discussion of the history of these proceedings. This litigation has its origins in the late 1940's and early 1950's, during which time petitioners were involved in the discovery, patenting, patent licensing, manufacturing, and distribution of certain broad spectrum antibiotic drugs, particularly tetracycline. These activities became the subject of numerous official proceedings, including a Federal Trade Commission proceeding under Section 5 of the Federal Trade Commission Act, 15 U.S.C. §41 et seq., a criminal prosecution under Sections 1 and 2 of the Sherman Antitrust Act, 15 U.S.C. §1 et seq. and more than 150 damage actions. The majority of the damage actions have been disposed of by settlement. We are concerned here with 49 unsettled and consolidated damage actions, which presently are proceeding through their pre-trial stage in the district court.

Early in August, 1971, and pursuant to agreement of the parties, the district court appointed three attorneys as masters to assist the court in determining the discoverability of a rather large quantity of documents which respondents sought to obtain from petitioners. Petitioners claimed that many of these documents were shielded by the attorney-client privilege.

The masters filed on October 1, 1971, their "opinion . . . on the application of the attorney-client privilege to documents

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1. The defendants will be referred to hereinafter as petitioners and the plaintiffs as respondents.

submitted by defendants." The opinion concluded, in summary, as follows:

> "...[A]ll Pfizer documents dealing with tetracycline prepared during or after September, 1954, are documents involved in the furtherance of a fraud [on the patent office] and are not protected by the attorney-client privilege.
>
> "...[A]ll Cyanamid documents dealing with tetracyline prepared during or after January, 1954, are documents involved in the furtherance of a fraud [on the patent office] and are not protected by the attorney-client privilege.
>
> "...[A]ll documents of Bristol, Squibb and Upjohn dealing with tetracycline prepared during or after December, 1955, are documents involved in the furtherance of a [violation of the Sherman Act] or tort and are not protected by the attorney-client privilege."

Opinion of Masters at 13, 16, 17. The district court, in the order here at issue, adopted the findings of the masters and directed that documents "which in the Masters' determination are not protected by the attorney-client privilege, will be produced to plaintiffs." In re Coordinated Pretrial Proceedings In Antibiotic Antitrust Actions, supra.

The order came under attack by petitioners, but Judge Lord refused to issue the certificate which is a prerequisite to an interlocutory appeal under 28 U.S.C. §1292(b). Petitioners thereupon instituted this proceeding to challenge the validity and scope of the discovery order. Petitioners contend basically that even if the masters and the district court were

correct in finding that prima facie showings of fraud and crime had been established, their conclusions regarding discoverability were erroneous because (1) there had been no finding that petitioners had employed the attorney-client relationship to perpetrate or further the fraud or crime, and (2) the language in which the conclusions were cast was overbroad and would require the exposure to respondents of privileged as well as unprivileged documents. Petitioners Bristol, Squibb, and Upjohn complain also that the findings against them lack adequate evidentiary bases.

Respondents counter first by arguing that mandamus is not an appropriate remedy, and next by denying that the law of privileged communications has been applied improperly or that the discovery order is overbroad.

II

We consider first whether mandamus is available in federal courts as a means of reviewing interlocutory orders, and particularly discovery orders. There appears to be some conflict in this regard among distinguished authorities on federal court procedure. After observing that many states routinely use extraordinary writs for the review of discovery orders, the authors of one treatis state the following:

> "The traditional federal attitude has been that 'as extraordinary remedies they are reserved for really extraordinary cases.' ... But there has been a general loosening of the federal attitude toward mandamus and the discovery cases have not been unaffected."

8 Wright and Miller, Federal Practice and

Procedure §2006, p. 32 (1971), citing Ex parte Fahey, 332 U.S. 258, 67 S.Ct. 1558, 91 L.Ed. 2041 (1947). Another commentator, however , devotes considerable attention to the opinion of the Supreme Court in Will v. United States, 389 U.S. 90, 88 S.Ct. 269, 19 L.Ed. 2d 305 (1967), and concludes that this opinion "appears to rechart the area of the availability of mandamus along quite restrictive lines." 9 Moore and Ward, Moore's Federal Practice §110.28, p. 308 (1970).

The Will case arose out of a criminal proceeding in which a federal district court judge had threatened to dismiss indictments unless the government disclosed certain information to the accused. The United States Court of Appeals for the Seventh Circuit issued a writ of mandamus directing that the disclosure order be vacated, but the Supreme Court found mandamus inappropriate and reversed. The office of mandamus, the Court stated, "is not to 'control the decision of the trial court,' but rather merely to confine the lower court to the sphere of its discretionary power." 389 U.S. at 104, 88 S.Ct. at 278. [2]

2. The United States Court of Appeals for the Ninth Circuit has relied upon the Will decision twice recently in denying mandamus relief to petitioners seeking avoidance of grand jury subpoenas, City of Los Angeles v. Williams, 438 F. 2d 522 (9th Cir. 1971); Lampman v. United States District Court, 418 F. 2d 215 (9th Cir. 1969).

[1] We do not believe that the Will opinion requires a denial of mandamus review in this case.[3] We are persuaded, rather, that the claim of privilege asserted by petitioners involves a "really extraordinary" question, and we agree with the following observation from the opinion of the Seventh Circuit Court of Appeals in Harper & Row Publishing Co. v. Decker, 423 F. 2d 487, 492 (7th Cir. 1970):

> . . . [B]ecause maintenance of the attorney-client privilege up to its proper limits has substantial importance to the administration of justice, and because an appeal after disclosure of the privileged communication is an inadequate remedy, the extraordinary remedy of mandamus is appropriate.

That decision was affirmed without opinion by a divided Supreme Court, 400 U.S. 348, 91 S.Ct. 479, 27 L.Ed. 2d 433 (1971). Cf. Hartley Pen Co. v. United States District Court, 287 F. 2d 324 (9th Cir. 1961). Due consideration of all aspects of this discovery order, in light

3. The Will case differs from the present case in that the former was a criminal proceeding and the policy against interlocutory appeals is especially pertinent to such proceedings. Further, the party seeking mandamus relief in Will was the government, and the Court took note of the limited right of prosecutors to review in criminal cases. 389 U.S. at 96, 88 S. Ct. 269.

particularly of possible consquences which review on appeal might prove inadequate to remedy impels us to hold that mandamus is an appropriate vehicle for review of the question raised by the present petition.

III

This brings us to the crucial question of whether mandamus ought to issue in this case. Our discussion of this question is divided to reflect consideration of four points: (1) the applicable law of privileged communications; (2) propriety of the findings that prima facie showings of fraudulent or criminal activity had been made against each defendant; (3) whether there were findings that defendants abused the attorney-client relationship in furtherance of such improper activity; and (4) the breadth of the discovery order.

Applicable Law

[2] It is a fundamental tenet of the law of evidence that, generally, communciations between attorney and client are privileged and not subject to compelled disclosure. Chirac v. Reinicker, 24 U.S. 278, 292, 11 Wheat. 278, 292, 6 L.Ed. 474 (1826); Hunt v. Blackburn, 128 U.S. 464, 470, 9 S.Ct. 125, 32 L.Ed. 488 (1888); Radiant Burners, Inc. v. American Gas Ass'n. 320 F. 2d 314, 318-322 (7th Cir. 1963); United States v. United States Shoe Machinery Corp., 89 F. Supp. 357, 358 (D. Mass. 1959). The general rule is subject to qualification, however, and it is with such a qualification that we are concerned in these cases.

The exception to the attorney-client privilege which is involved here has been formulated as follows:

> It has been agreed from the beginning that the privilege cannot avail to protect the client in concerting with the attorney a crime or other evil enterprise. This is for the logically sufficient reason that no such enterprise falls within the just scope of the relation between legal advisor and client. (Emphasis in original.)

8 Wigmore, Evidence §2298, p. 572 (McNaughton rev. 1961). The Supreme Court recognized this exception to the privilege in dictum in Clark v. United States, 289 U.S. 1, 15, 53 S.Ct. 465, 77 L. Ed. 993 (1933), and the United States Court of Appeals for the Second Circuit decided the often cited case of United States v. Bob, 106 F. 2d 37 (2nd Cir. 1937), cert. denied, 308 U.S. 589, 60 S. Ct. 115, 84 L.Ed. 493 (1939), on the basis of this exception. The masters in this case clearly were aware of the State of the law. They referred to the previously mentioned passage from the Clark opinion and proceeded to lay down a rule for the guidance of their own deliberations:

> . . . [A]ll documents involved in the furtherance of the crime or tort are not protected by the attorney-client privilege and will be produced to the plaintiffs.

Opinion of Masters at 5-6, 8.

[3] Under present law, a party seeking to overcome a claim of attorney-client

privilege by invoking the improper purpose exception has the burden of producing sufficient evidence to sustain a finding that the challenged communications were made in furtherance of a crime or tort. Clark v. United States, supra, 289 U.S. at 15-16, 53 S.Ct. 465; Securities & Exchange Commission v. Harrison, 80 F. Supp. 226, 230 (D.D.C. 1948); McCormick, Evidence §99, p. 201 (1954); Cf. Proposed Rules of Evidence for United States Courts and Magistrates, Advisory Committee's Note to Rule 503(d)(1), 51 F.R.D. 315, 365 (1971).

Masters' findings

The masters pertinently observed in their opinion that the attorney-client privilege long has been recognized at law, and, as noted above, considered the relevant exception to the attorney-client privilege. In attempting to bring the subject order within the exception discussed by the Clark Court, the masters stated:

> "On the basis of all the evidence available for consideration, it is the masters' opinion that from a certain point in time * * * a prima facie showing of fraud on the patent office has been made against Pfizer and Cyanamid with respect to their involvement in Pfizer's procurement of its Conover Patent on tetracycline."
>
> *
>
> "With respect to Bristol, Squibb and Upjohn, the masters concluded that from a certain point in time * * *

> a prima facie showing of violation of the Sherman Act with respect to the pricing and marketing of tetracycline has been made. Defendants' conduct may constitute a crime or tort or both." Masters' opinion p. 8.

We consider the above findings in reverse order. Although the masters purportedly found support for their conclusion as to Bristol, Squibb and Upjohn on the basis of "materials properly before them . . .", it seems clear from an anaylsis of their entire opinion and the briefs filed in support of and in opposition to the discovery order, that the masters relied largely, if not entirely, upon the prior Government proceedings to support their finding that the actions of petitioners Bristol, Squibb and Upjohn constitute a prima facie showing of a violation of the Sherman Antitrust Act. In our view, an objective appraisal of the prior proceedings fails to show such a prima facie violation.

[4] We briefly review the relevant prior proceedings. The Federal Trade Commission filed a complaint under Section 5 of the Federal Trade Commission Act (15 U.S.C. §45) against all five of the present petitioners. The hearing examiner exonerated all of them, but the full Commission reversed in part the examiner's decision. On appeal, the Sixth Circuit reversed and remanded for further proceedings. American Cyanamid Co. v. F. T. C., 363 F. 2d 757 (6th Cir. 1966). The court found that Chairman Dixon of the Commission was disqualified from participating in the hearing. In so holding, the court concluded:

[B-46]

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> "Under the facts and circumstances of this case we conclude that the participation of Chairman Dixon in the hearing 'amounted . . . to a denial of due process which invalidated the order under review.'" (Citing cases.) 363 F. 2d at 767.

Thus, in our view, the invalidation of the Commission's order rendered it without any force or effect insofar as furnishing a basis for finding a prima facie violation of any law.

On remand, the four Commissioners who heard the matter were divided on the issue of price fixing. Two concluded it was not necessary to the disposition of the case to find the parties were guilty of price fixing. Two Commissioners believed that the evidence substantiated the allegations relating to price fixing. In this posture, no finding was made and the price fixing issue was dismissed.

There remains for consideration the criminal proceeding instituted in the Second Circuit. In 1961, petitioners Pfizer, Cyanamid and Bristol were indicted for conspiring to restrain trade in broad spectrum antibiotics and to monopolize such drugs. Petitioners Squibb and Upjohn were named as co-conspirators, but not as defendants. A jury found the three defendants guilty. The judgment of conviction was reversed and the cause remanded because of trial irregularities. United States v. Charles Pfizer Co. 426 F. 2d 32 (2d Cir. 1970). The Supreme Court granted certiorari on May 3, 1971, 402 U.S. 942, 91 S.Ct. 1617, 29 L.Ed. 2d 110 and on Jan. 24, 1972 affirmed the decision of the Second Circuit by an

equally divided Court. 404 U.S. 548, 92 S.Ct. 731, 30 L.Ed. 2d 721. Respondents emphasize that the Second Circuit held in effect that the evidence was sufficient to sustain the conviction because the judgment was reversed on other grounds. Although the argument has some appeal, the fact is that the judgment of conviction has been reversed. Conceivably, on a retrial under proper instructions, the defendants may be acquitted. See State of West Virginia v. Chas. Pfizer & Co., 314 F. Supp. 710 at 742.

In summary, we are constrained to believe that the masters gave too much weight to the Federal Trade Commission proceedings against Bristol, Squibb and Upjohn, which as noted, have been aborted, and to the criminal prosecution, which, at this time at least, is not conclusive. Therefore, we hold that the prior proceedings do not provide an adequate premise for finding that a prima facie case of violation of the Sherman Act has been established against petitioners Bristol, Squibb and Upjohn. Accordingly, we direct the district court to vacate Discovery Order No. 71-15 as to petitioner Bristol-Myers Company, Squibb Corporation and the Upjohn Company, without prejudice to the court to enter another appropriate discovery order which has for its foundation a proper prima facie case of fraud, criminal conduct or tort.

[5] We reach a different conclusion as to petitioners Pfizer and Cyanamid. The masters found on the basis of the prior F.T.C. proceeding that a prima facie case of fraud had been made against these two companies. We agree. The F.T.C. found that Pfizer and Cyanamid had com-

mitted a fraud on the Patent Office in connection with the issuance of a patent. The Sixth Circuit affirmed that finding. Chas. Pfizer & Co. v. F.T.C., 401 F. 2d 574 (6th Cir. 1968), cert. denied, 394 U.S. 920, 89 S.Ct. 1195, 22 L.Ed. 2d 453 (1969). Certainly the final decision of the Court of Appeals for the Sixth Circuit is adequate to form a sound basis for the finding of a prima facie case of fraud.

Abuse of attorney-client relationship

[6] All petitioners have contended vigorously that the masters' reasoning halted at the point of finding that a prima facie showing of raud or crime had been made, thus falling short of the requisite finding that the attorney-client relationship had been abused. After the petition in this case had been filed, we directed the masters to make a supplementary report clarifying this point and others. It is clear from the supplementary report that the masters did proceed to make the necessary finding of abuse, based upon the reasoning that Cyanamid and Pfizer documents dealing with enforcement of the patent, which was found tentatively to have been procured through fraud, or with production, pricing, marketing, distribution, or licensing of the patented product, were prepared in an attempt to further and perpetruate the original fraud. Based upon the record before us we are not persuaded to hold that this determination is erroneous.

Breadth of order

It remains for us to consider whether

the masters' ultimate conclusions amount to, as petitioners submit, an overbroad, "sweeping denial of defendants' attorney-client privilege," or whether the conclusions are reasonably bottomed on a review calculated to shield from discovery all communications by means of which petitioners legitimately sought or received legal advice.

[7] The ambiguous language in which the masters' conclusions initially were couched was another factor motivating our request for a supplementary report. We are satisfied by the supplemental report, however, that the masters reviewed petitioners' files scrutinously before reporting their findings, and that, despite the broad language of the original opinion, the masters have not recommended, nor has the district court ordered, an indiscriminate baring to respondents of the files of petitioners and their counsel. Thus the masters in their report, after setting forth the test which had been applied to individual documents to determine discoverability, stated the following: "Documents have been marked or segregated in accordance with these criteria . . . The masters will of course work with the parties in explaining the sorting process." Supplementary Report of Masters at 3.

It is evident that the discovery process in these cases is far from completion. Although we decline to issue the writ, directions for carrying out the district court's order should be issued as to Pfizer and Cyanamid. The district court and masters are directed to continue to guard the attorney-client privilege of petitioners Pfizer, Inc.

and American Cyanamid by reviewing, if necessary, all contested documents prior to ruling on the discoverability of such documents and by ordering the production to respondents only of those documents individually found to have been prepared in perpetration or furtherance of fraudulent activity. The district court is directed further to formulate such additional procedures or guidelines as may be necessary to facilitate the prompt production of unprivileged documents.

RECAPITULATION

1. Judge Lord is directed to vacate Discovery Order No. 71-15 as to petitioner Bristol-Myers Company, Squibb Corporation and Upjohn Company without prejudice consistent with our views above expressed.

2. Discovery Order No. 71-15 shall remain in force and effect as to petitioners Pfizer, Inc., and American Cyanamid Company. Discovery shall be carried out and conducted in accordance with the general directions above set forth.

3. Each of the parties to this cause shall bear its own cost.

APPENDIX C

[This appendix is paginated from 351a through 908a]

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
RALEIGH DIVISION

CIVIL NO. 2287

THE STATE OF NORTH CAROLINA, Plaintiff

v.

CHAS. PFIZER & CO., INC.,
AMERICAN CYANAMID COMPANY,
BRISTOL-MYERS COMPANY
OLIN MATHIESON CHEMICAL CORPORATION,
and
THE UPJOHN COMPANY, Defendants

MEMORANDUM OF DECISION

This is an antitrust treble damage action brought by the State of North Carolina (plaintiff) on behalf of itself, all state, county and local governmental

agencies and all citizen consumers who purchased broad-spectrum antibiotic drugs manufactured and sold by the defendants in North Carolina during the period 1953 to 1966. The defendants are Chas. Pfizer & Co., Inc. (Pfizer), American Cyanamid Company (Cyanamid), Bristol-Myers Company (Bristol), Olin Mathieson Chemical Corporation (Squibb), and The Upjohn Company (Upjohn).

[Footnote 1. The action was allowed to proceed as a class action pursuant to Rule 23, F.R.C.P., the class being defined as:

> (a) The State, its departments, agencies, hospitals, institutions and political subdivisions, and all counties, cities and other governmental entities within the state (other than those of the federal government) including without limitation hospital districts, hospitals and other institutions supported in whole or in part by state, county, city or local governmental funds which purchased or paid for broad-spectrum antibiotic products during the period 1954 through 1966.

(b) Purchasers within the state who during the period 1954 through 1966 purchased or paid for broad-spectrum antibiotic products for human consumption from public or private hospitals or from pharmacies, drug stores or other retail outlets including the State on account of payments made therefor for the benefit of recipients of welfare programs.

Two individuals, Bernard A. Harrell, Receiver, and Thomas J. Bolch, also joined as parties plaintiff adopting essentially the pleadings of the State, but by agreement their claims were prosecuted by the State as a part of its claim with the understanding that the individuals would be bound by the final judgment rendered.

The word "plaintiff" as used in this memorandum will encompass the State of North Carolina, the consumer class and the two individual plaintiffs.]

The case has been tried to the court without a jury on the issues of the alleged violations of the antitrust laws of the United States by the defendants, the issues of the fact and measure of compensable injury (damages) being reserved for trial at a later time in the event of a finding of liability on the part of any or all of

the defendants. In this memorandum of decision the court will record its findings of fact and conclusions of law in conformity with Rule 52, F.R.C.P.

[Footnote 2. This is one of a great number of similar suits brought by virtually all of the states and other plaintiffs against these defendants apparently stemming from a proceeding by the Federal Trade Commission instituted in the late 1950's (see 401 F.2d 574, 6th Cir. 1968, cert. denied, 394 U.S. 920) and a criminal action brought against three of the defendants, Pfizer, Cyanamid and Bristol, in the Southern District of New York. The civil litigation including this action was transferred to the District of Minnesota under the multi-district litigation statutes for consolidated pre-trial and discovery and possible trial, but a motion made in that court to sever this action and return it to this district for trial was allowed. The court is informed that a substantial portion of the civil litigation in the Minnesota court has since been settled and that the criminal action, following reversal of a judgment of conviction by the Second Circuit in 1970 (see 426 F.2d 32) has now been retried before Judge Cannella without a jury and has resulted in a judgment of acquittal. His decision apparently has not been reported.

The plaintiff's case here has been tried for the most part on some 25,000 pages of testimony amassed in these prior

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proceedings and introduced here in deposition form.]

JURISDICTION AND VENUE

The United States District Courts have exclusive jurisdiction of actions for damages for violations of the federal antitrust laws, and the venue for this action is properly laid in the United States District Court for the Eastern District of North Carolina. |5 U.S.C. Sec. |5 and 22. Neither jurisdiction nor venue is at issue in this case.

PLAINTIFF'S ALLEGATIONS

[Footnote 3. This section of the memorandum is quoted directly from plaintiff's brief.]

Plaintiff charges that defendants at varying times during the period commencing about November, |953 through the winter of |955 entered into contracts, combinations, agreements, understandings and conspiracies

to unreasonably restrain trade and commerce in the broadspectrum antibiotic market generally and the tetracycline market particularly, all in violations of Sections | and 2 of the Sherman Act.

[Footnote 4. Sections | and 2 of the Sherman Act, |5 U.S.C. Sec.| and 2, provide in pertinent part as follows:

> Section |. Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal . . .
>
> Section 2. Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several states . . . shall be deemed guilty of a misdemeanor . . .

The action is authorized by Section 4 of the Clayton Act, |5 U.S.C. Sec. |5, which provides:

> Section 4. That any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor in any district court of the United States in the district in which the defendant resides or is found or has an agent, without respect to the amount in controversy, and shall

recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.]

Plaintiff aleges the gist of the understandings reached between the defendants, among other things, was:

A. As to Price Fixing -- Pfizer and Cyanamid agreed that the new broad-spectrum antibiotic, tetracycline, whether patentable or not, was to be priced and marketed by each of them in such a manner as to maintain the then existing prices and price structure of their BSA products, i.e., Aureomycin and Terramycin. Subsequently Bristol, Squibb and Upjohn agreed to price and market tetracycline in accordance with the structure established by Pfizer and Cyanamid. It was understood and agreed to at varying times between two or more, but ultimately all defendants, that sales were to be at substantially identical prices to the same class of trade

and sales were to be on substantially identical terms in identical package sizes; and

B. As to Limitations on the Number of Manufacturers and Conditions on Sellers:

(1) In addition to the foregoing understandings, initially the Pfizer and Cyanamid understandings were that the manufacture, distribution and sale of tetracycline was to be limited to Pfizer and Cyanamid.

(2) Subsequently, however, on or about December, 1955 (through the joint efforts of Bristol, Squibb and Upjohn resulting from unlawful contracts, combinations, and conspiracies entered into between these latter defendants on or about September, 1954), Bristol, Squibb and Upjohn joined the continuing combination and conspiracy of Pfizer and Cyanamid of November, 1953.

(3) The gist of the understandings reached between Pfizer, Bristol, Squibb and Upjohn during or about the winter of 1955 was that Bristol was to remain in the market as a third manufacturer, distributor and seller of tetracycline to the trade, while Squibb and Upjohn would continue to refrain from the manufacture of tetracycline; they would continue to purchase their entire requirement of tetracycline in bulk from Bristol; they would refrain from resale of the bulk to any other party; and they would limit their resale of tetracycline to finished dosage forms to the trade only.

C. Understandings Re the Patent:

(1) Each of the defendants understood at all of the time in controversy that the issuance of a patent and its continued existence as an enforceable instrument on the broad claims

to the chemical compound tetracycline were essential to maintain the prices then prevailing in the BSA market generally; and in particular for the therapeutic product tetracycline (vis-a-vis the chemical compound).

(2) Plaintiff avers that Pfizer and Cyanamid took concerted steps to assure the issuance of a patent covering the broad claims to the chemical compound tetracycline; and toward that end, each made material misrepresentations of fact to, and withheld material information from, the United States Patent Office, thereby causing the issuance of the Conover patent covering the broad claims to the chemical compound tetracycline which otherwise would not have been issued.

(3) Plaintiff avers that Cyanamid, Bristol, Squibb and Upjohn knew of the manner in which Pfizer had caused

the Conover patent to issue, and notwithstanding such knowledge, actively sought, acquired and enforced licenses thereunder.

DEFENSES

Each of the defendants filed answer denying generally the material allegations of the complaint in which violations of the antitrust laws were charged. Other defenses raised included the statute of limitations, laches, failure of the complaint to state a claim, standing and the propriety of maintenance of the case as a class action, but these defenses have all been disposed of adversely to the defendants leaving only for determination the question of defendants' liability under the antitrust statutes.

THE ISSUES

In its brief the plaintiff has correctly framed the two principal issues raised by the pleadings and litigated during the trial as follows:

"A. Did defendants Pfizer and Cyanamid, during the fall of 1953; defendants Bristol, Squibb and Upjohn, during the late summer and early fall of 1954; and all defendants during late fall and early winter of 1955 enter into contracts, combinations, agreements, understandings or conspiracies to unreasonably restrain trade and commerce in the manufacture, distribution and sale of the broad-spectrum antibiotic tetracycline, its analogues, and combination products containing tetracycline or its analogues by:

(1) Fixing and maintaining the prices of tetracycline, its analogues and combinations products containing tetracycline or its analogues at the then existing price of Pfizer's Terramycin and Cyanamid's Aureomycin; and

(2) Limiting the number of manufacturers of tetracycline and its analoques to Pfizer, Cyanamid and Bristol and the number of sellers of tetracycline to Pfizer, Cyanamid, Bristol, Squibb and Upjohn,

in violation of Section | of the Sherman Act?

"B. Did defendants Pfizer and Cyanamid, during the fall of |953; defendants Bristol, Squibb and Upjohn, during the late summer and early fall of |954; and all defendants during late fall and early winter of |955 enter into contracts, combinations,

agreements, understandings and conspiracies to monopolize, and actually monopolize the manufacture, distribution and sale of tetracycline, its analogues, and combination products containing tetracycline or its analoques in violation of Section 2 of the Sherman Act?"

[Footnote 5. The plaintiff posed a third issue arising from a belatedlyraised further claim against Pfizer alone - that of an attempt to monopolize - stated thus in its brief:

> "In addition to the violations of law set forth above, plaintiff alleges that Pfizer is individually and separately liable to plaintiff for its violation of Section 2 of the Sherman Act for its attempt to monopolize, and monopolization of, the product tetracycline through the fraudulent procurement of its patent on tetracycline and its subsequent enforcement thereof with knowledge of the manner and methods used by its agents in causing the patent to issue."

It is questionable that plaintiff's complaint is fairly susceptible to such interpretation. There was no mention of this claim in plaintiff's opening statement

nor at any time in the trial prior to plaintiff's final argument and only then in response to a question from the bench. Pfizer, claiming surprise, has protested vigorously the assertion of the claim in this manner, and the court is of opinion that the objection is well taken. The court has nevertheless treated the claim as having been timely alleged and presented, but has disposed of it in connection with the treatment of the two principal issues actually litigated.]

HISTORICAL BACKGROUND AND CHRONOLOGY

The first major antibiotic discovered and introduced was penicillin which was used extensively during World War II and thereafter. Subsequent to the introduction of penicillin, additional antibiotics were discovered and marketed. Four of these were effective against a wider group of disease-causing microorganisms than was penicillin, and they became known as "broad-spectrum" antibiotics. The first of these, chlortetracycline, was covered by the Duggar Patent which issued to Cyanamid

in September, 1949. Cyanamid first marketed this drug under the trade name "Aureomycin" on December 1, 1948.

On January 25, 1949, Parke, Davis & Company introduced the second broad-spectrum antibiotic, chloramphenicol, under the trade name, "Chloromycetin". It was covered by a patent issued to Parke, Davis in October, 1949.

The third broad-spectrum antibiotic, oxytetracycline, was introduced in March, 1950, by Pfizer under the trade name, "Terramycin". This drug was covered by the Sobin Patent issued to Pfizer in July, 1950.

The fourth of the broad-spectrums, tetracycline, was discovered by Pfizer's Dr. Conover in June, 1952. He had speculated that it might be possible to develop a new and superior antibiotic by removing the chlorine atom from

chlortetracycline (Aureomycin), and he was finally able to accomplish this by hydrogenating Aureomycin so as to replace the chlorine atom with a hydrogen atom - a process called "deschlorination". On October 23, 1952, Pfizer filed Conover's application for a patent on tetracycline and the deschlorination process.

Shortly thereafter scientists at Cyanamid also discovered that tetracycline could be produced by deschlorination of Aureomycin, and on March 16, 1953, Cyanamid filed its Boothe-Morton application for a patent on tetracycline and the deschlorination process.

During 1953 scientists at the Heyden Chemical Corporation (Heyden) and at Bristol were conducting experiments in an effort to produce tetracycline by direct fermentation. On September 28, 1953, Heyden filed its Minieri application for a

patent on tetracycline and the fermentation process for producing it, and on October 19, 1953, Bristol filed a similar application under the name of Heinemann for a product and direct fermentation process patent on tetracycline.

[Footnote 6. Shortly after filing its Minieri application Heyden entered into negotiations with Cyanamid with the view to selling Heyden's Antibiotic Division to Cyanamid. An agreement of sale was entered into on November 4, 1953, and on December 1, 1953, Cyanamid took possession of the assets of Heyden's Antibiotic Division including its Minieri patent application. Since this application for a product patent on tetracycline was subsequent in time to Cyanamid's pending Boothe-Morton application, Cyanamid abandoned the product patent claims of the Minieri application but continued to prosecute the claims for a direct fermentation process for the production of tetracycline. A patent on the Minieri process claim was issued to Cyanamid in February, 1956.]

On October 29, 1953, the United States Patent Office issued notices "to copy claims" to both Pfizer and Cyanamid, thus indicating an interference proceeding

[Footnote 7. Under patient office rules an "interference" is a proceeding conducted for the purpose of determining priority of invention between two or more applicants claiming the same patentable

invention (Patent Office Rule 201 (a); 37 C.F.R. 1.201(a)).]

on pending applications on tetracycline. Faced with the prospect of delay, expense and uncertainty with which a patent interference is normally attended, John McKeen, chief executive officer of Pfizer, who had correctly surmised that Cyanamid was to be the other party to the interference, initiated discussions with Cyanamid's chief executive officer, Dr. Wilbur Malcolm, with the view to settling the interference. It was during the course of two meetings which took place between these two officers in November of 1953 that plaintiff here alleges the conspiracies and agreements to violate the antitrust laws were born. The details of these meetings as disclosed by the evidence will be more fully discussed later.

On November 16, 1953, Cyanamid marketed the first tetracycline under its brand

name, "Achromycin", the introductory price being identical with the price of the other three broad-spectrum antibiotics then on the market, Aureomycin, Terramycin and Chloromycetin.

On November 25, 1953, in accordance with the terms of the agreements reached in the McKeen-Malcolm meetings, Cyanamid began shipments of bulk tetracycline to Pfizer. These continued until March 31, 1954, and amounted to a total of about 10,000 kilograms.

On January 11, 1954, following formal declaration by the patent office of the first tetracycline interference, Pfizer and Cyanamid executed written instruments embodying the agreements negotiated by McKeen and Malcolm. Thereafter Pfizer and Cyanamid exchanged their proofs of priority of discovery of tetracycline as a result of which Cyanamid conceded priority to Pfizer.

By January 15, 1954, Pfizer was able to package and label the bulk tetracycline which it was obtaining from Cyanamid and it began marketing this under its trade name, "Tetracyn". Its introductory published prices followed those previously established for tetracycline by Cyanamid for its Achromycin and, of course, the prices were identical with the published prices of the other three broad-spectrum antibiotics then on the market.

On March 2, 1954, Bristol, in prosecuting its Heinemann application, was able to convince the patent examiner, at least tentatively, that the salt of tetracycline, tetracycline hydrochloride, was patentably distinct from tetracycline which had been the subject of the first interference, and as a consequence the examiner declared the second (sometimes referred to as "salt") interference between

Bristol's Heinemann, Pfizer's Conover and Cyanamid's Minieri applications. The interference proceedings continued from March to October, 1954, during which time the parties filed and argued numerous motions in the patent office.

Meanwhile, Bristol, undeterred by Pfizer's threat of suit for patent infringement when and if the Conover patent should issue, continued to produce tetracycline through its direct fermentation process, and on May 1, 1954, Bristol began to market this product under the trade name, "Polycycline". Its published prices followed those for the tetracycline products of Cyanamid and Pfizer which were already on the market.

By September, 1954, Bristol had entered into agreements with Squibb and Upjohn to sell them bulk tetracycline, and shortly thereafter these two companies began to

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market tetracycline under their own trade names, "Steclin" for Squibb and "Panmycin" for Upjohn. Squibb's introductory published prices followed those of Pfizer, Cyanamid and Bristol except that its wholesale prices were slightly higher, while Upjohn, which was last to come on the market, followed generally the prices of the other four companies.

On October 14, 1954, the patient examiner issued a decision dissolving the second interfernce, primarily on the ground that tetracycline was unpatentable over the prior art as disclosed in Cyanamid's Duggar and Niedercorn patents because tetracycline as well as Aureomycin appeared to be co-produced in fermentation processes disclosed by these two prior patents and employing the Duggar species, streptomyces aureofaciens. Since the examiner also held that tetracycline hydrochloride was not

patentably distinct from tetracycline, he concluded that the subject matter of the interference was not patentable to anyone. Thereafter, in November, 1954, the examiner issued rejections on all of the tetracycline and tetracycline hydrochloride claims in Pfizer's Conover, Cyanamid's Minieri, and Bristol's Heinemann applications on the same grounds that he had relied upon for dissolution of the interference.

Following the dissolution of the second interference Pfizer continued the ex parte prosecution of the Conover application, and in late November and early December, 1954, Pfizer's counsel submitted affidavits of proof concerning the prior art co-production question which the patent examiner accepted as sufficient to overcome his previous rejection of Conover's product claims. A substantial part of the battle

in this action has been waged around plaintiff's contention that in these proceedings Pfizer made material representations of fact to and withheld material information from the patent examiner; that its conduct constituted a fraud on the patent office; and that otherwise the Conover patent would never have issued. It did issue on January 11, 1955.

Meanwhile a suit brought by Cyanamid against Bristol in late September, 1954 for infringment of its Duggar patent in the manufacture by Bristol of tetracycline using Bristol's tetracycline fermentation process was settled in mid-December, 1954. The terms of the settlement included an agreement that Cyanamid would grant Bristol a non-exclusive license under Cyanamid's Aureomycin patent to manufacture and sell tetracycline containing not more than six

per cent Aureomycin for a royalty of five per cent of Bristol's net sales of its tetracycline products.

On the same day the Conover tetracycline patent issued, January 11, 1955, Pfizer brought suits against Bristol, Squibb and Upjohn in the United States District Court in Atlanta, Georgia, for infringement. These defendants, in turn, filed declaratory judgment suits in the Southern District of New York for the purpose of having the Conover patent declared invalid. They were also able to obtain the transfer of the Pfizer infringement suits to the Southern District of New York.

[Footnote 8. See 131 F.Supp. 21; 225 F.2d 718; and 225 F.2d 720.]

For the remainder of 1955 this litigation was prosecuted and defended vigorously by the opposing parties, Pfizer on the one hand and Bristol, Squibb and

Upjohn on the other. Bristol, Squibb and Upjohn instituted extensive discovery in an effort to determine whether Pfizer had given false or misleading information to the patent office in the course of obtaining the Conover patent on tetracycline, but the evidence developed was apparently considered inconclusive.

The litigation stood in this posture in the late fall of 1955 when one John G. Broady, a private detective, was tried and convicted in New York City on an indictment charging wiretapping of various telephone lines including those of Bristol and Squibb. At the trial it came out in evidence that Broady had been retained by Pfizer whereupon Bristol's counsel was instructed by its chief executive officer, Frederick Schwartz, to inform Pfizer's counsel that Bristol planned to bring wiretapping into the infringement suit as

an "unclean hands" defense and as a counterclaim.

[Footnote 9. "The Broady incident gave to Bristol a trump card which it had not hitherto possessed and Bristol played it boldly." U.S. v. Chas. Pfizer & Co., Inc., 426 F.2d 32, 37 (2nd Cir. 1970).]

The Broady incident brought about a radical change in Pfizer's attitude toward the litigation, and meetings were held on December 14 and 15, 1955, between Schwartz of Bristol, McKeen of Pfizer and their patent counsel, which resulted in agreement to settle the litigation. Under the terms of the settlement Pfizer agreed to grant Bristol a nonexclusive license to make, use and sell tetracycline, and direct licenses to Squibb and Upjohn to use and sell tetracycline to the drug trade. It was through the medium of these meetings and the negotiated settlement resulting therefrom that plaintiff alleges Bristol, Squibb and Upjohn were able to join ("force

their way into") the alleged pre-existing conspiracy between Pfizer and Cyanamid. Plaintiff alleges the five-member conspiracy thus formed continued until November, 1966.

Beginning with a broad economic investigation of the antibiotics industry instituted in mid-1957 by the Federal Trade Commission and continuing to the present day the five defendants herein, in addition to being subjected to investigation of the F.T.C. and the Subcommittee on Antitrust and Monopoly of the Judiciary Committee of the United States Senate (the "Kefauver Committee"), have defended one criminal action and countless civil suits alleging violations of the antitrust laws of the United States in the manufacture and sale of broad-spectrum antibiotic drugs.

[Footnote 10. The reported cases of which this court is aware are as follows:

United States v. Chas. Pfizer & Co., Inc., et al., 245 F.Supp. 801 (S.D.N.Y. 1965)

American Cyanamid Co. v. F.T.C., 363 F.2d 757 (6th Cir. 1966)

Chas. Pfizer & Co., Inc., v. F.T.C., 401 F.2d 574 (6th Cir. 1968), Cert. denied, 394 U.S. 920 (1969)

United States v. Chas. Pfizer & Co., Inc., 217 F.Supp. 199 (S.D.N.Y. 1963)

United States v. Chas. Pfizer & Co., 281 F.Supp.837 (S.D.N.Y.1968)

United States v. Chas. Pfizer & Co., 426 F.2d 32 (2nd Cir. 1970), modified, 437 F.2d 957, cert. granted, 402 U.S. 942, aff'd., 404 U.S. 548 (1972)

As previously indicated in Footnote 2, Judge John M. Cannella's judgment of acquittal on the retrail of the criminal case apparently has not been reported nor has it been brought to the attention of this court.]

So far as the court is informed, this is the first of the civil actions to come to trial and reach the decision stage.

THE EVIDENCE

The sections of this memorandum which

follow will treat the principal points advanced by plaintiff and the evidence offered in support of its theory of liability on the restraint of trade and monopoly issues.

[Footnote 11. In arriving at its findings and conclusions herin expressed the court has reviewed and considered all of the testimony and documentary evidence offered by the plaintiff in the case notwithstanding any ruling excluding any such evidence made at the time of its offer and not thereafter changed. In the words of Justice Holmes, "a concession to the shortness of life: has precluded a summary of all the 12,000-odd page record, the several thousand exhibits offered and the many hundreds of pages of briefs and legal arguments submitted during the course of the trial and thereafter.]

While the various topics are discussed separately, the court has been careful to consider all the plaintiff's evidence collectively with due regard to the Supreme Court's admonition that the antitrust plaintiff should be given the full benefit of his proof "without tightly compartmentalizing the various factual

components and wiping the slate clean after scrutiny of each." Continental Ore Company v. Union Carbide & Carbon Corporation, 370 U.S. 690, 699 (1962).

The McKeen-Malcolm Meetings

The cornerstone of plaintiff's case against Pfizer and Cyanamid is alleged to have been laid at the time of two meetings between the two chief executive officers of these companies in early November, 1953. At that time both Pfizer and Cyanamid had product and process patents pending on tetracycline, and a notice to copy claims having been issued by the Patent Office presaging the declaration of an interference to determine priority of invention, John McKeen, President of Pfizer, initiated a meeting with Dr. Wilbur Malcolm, Cyanamid's President, to discuss settlement of the interference when and if it should be declared. To understand

properly the motivations and actions of these two principals in the meetings it is necessary to review briefly the status of the tetracycline program in each of the companies as it existed in the fall of 1953.

At Pfizer there was general optimism that by reason of the prior publication in a scientific journal by its scientists of Dr. Conover's discovery of tetracycline ("The Stephens Article") it had priority of invention and would ultimately receive the patent. Unfortunately, it had not been able to develop a process for the production of tetracycline by direct fermentation, and it was thus limited to its deschlorination process in making tetracycline from Aureomycin on which Cyanamid held the Duggar-Niedercorn patents. This created a blocking patent situation, but it was not Pfizer's only

worry. It had also learned that Cyanamid was about to come on the market with its brand of tetracycline, and this meant that Cyanamid would have valuable "lead time" in the introduction and sale of this new "wonder drug". This lead time, considered of prime importance in the pharmaceutical industry, would be very difficult for Pfizer to overcome even if it should ultimately obtain the patent and somehow manage to avoid its then dependence upon Aureomycin as the base product from which to produce tetracycline.

At the same time Cyanamid was having its problems. Its extensive clinical testing of tetracycline had demonstrated its superiority over Aureomycin, the sale of which had been declining in the face of the competition by Pfizer's apparently superior Terramycin, and Dr. Malcolm had committed Cyanamid to a program to promote

tetracycline and downgrade Aureomycin which had previously been its "bread and butter" product. Cyanamid had made substantial expenditures in the development of this program, yet it appeared that Pfizer might well have priority of invention by reason of having published the Stephens article prior to Cyanamid's production of tetracycline.

It was in this setting that McKeen and Malcolm had their first meeting about November 6, 1953. At that time they confirmed the fact that Pfizer and Cyanamid were the two parties to the projected interference, and the terms of a proposed settlement were discussed. They agreed to meet again about ten days later, and at the second meeting they agreed upon the general terms of a settlement subject, with one exception, to the formal declaration of the interference by the Patent Office. The

exception was that Cyanamid agreed at McKeen's insistence to sell Pfizer 10,000 kilograms of bulk tetracycline with shipments to begin immediately.

[Footnote 12. It was vital to Pfizer to obtain this bulk tetracycline in order to cut down on Cyanamid's lead time.]

The interference was declared on December 28, 1953, and two weeks later the agreements reached in the McKeen-Malcolm meetings were formalized in two written documents, one a license from Cyanamid to Pfizer to make Aureomycin for conversion to tetracycline by deschlorination and the other to settle the interference. The principal provisions of the agreements were (1) that proofs of priority of invention would be exchanged, and if the parties could not agree on priority the question would be submitted to the Patent Office for decision; (2) that the party found not prior would take the necessary steps to

concede priority in the Patent Office; (3) that the losing party would receive a non-exclusive license under the tetracycline patent when it issued at a royalty rate of two and one-half per cent; (4) that Pfizer would receive a nonexclusive license under Cyanamid's Aureomycin patent to make that product in connection with the manufacture of tetracycline and the knowhow and culture to make that license effective; and (5) that nothing in the settlement agreement was to be deemed to impair the right of a patentee to license others.

It is the plaintiff's position that in addition to the agreements embodied in the written instruments that McKeen-Malcolm meetings resulted in secret agreements not reduced to writing under the terms of which third parties were not in fact to be licensed to sell tetracycline nor were they to be sold the antibiotic in bulk. And to

this end, plaintiff charges, Pfizer and Cyanamid agreed to do whatever was necessary to insure that one or the other of them obtained a patent in order to legalize the monopoly and exclude others from the market. There was a further understanding, so plaintiff contends, as to the price at which tetracycline would be sold in the market.

On the contrary, the four principals who participated in the meetings have given consistent and convincing testimony in this and the prior cases that no such agreements were made.

[Footnote 13. Three of them, John McKeen and John Powers of Pfizer and George Martin of Cyanamid, all now retired, appeared in person in this court. The court found them intelligent, forthright and credible. The testimony of Dr. Malcolm, also retired from Cyanamid, came in by way of the transcripts of former proceedings. His absence was explained on the basis of a precarious health condition, but his previous testimony was corroborated by that of his successor at Cyanamid, Lyman Duncan, and Robert Fiske, Cyanamid's patent

counsel, both now retired, who appeared and testified in this court.]

Nor are the inferences to be drawn from the course of conduct thereafter followed by these parties necessarily inconsistent with legitimate business practices. Settlement of the patent interference is a normal, routine method of resolving such controversies and is sanctioned by the courts. Hutzler Brothers Company v. Sales Affiliates, Inc., 164 F.2d 260, 267 (4th Cir. 1947). Nor are cross-licensing agreements necessarily violative of the antitrust laws. "In a case involving blocking patents such an arrangement is the only reasonable method for making the invention available to the public." International Manufacturing Company v. Landon, Inc., 336 F.2d 723, 729 (9th Cir. 1964), citing Standard Oil Company v. United States, 283 U.S. 163 (1931).

[Footnote 14. Of course, if a price-fixing agreement is combined with the agreement to pool patents, the arrangement may become unlawful, United States v. Line Material Company, 333 U.S. 287 (1948), but as will be seen later, the court has found no price-fixing agreement in this case.]

The refusal to license others was no more than a continuation of policies previously followed by Pfizer, Cyanamid and Parke-Davis with respect to granting licenses under their patents on the first three broad-spectrum antibiotics. But even so, within two years after the McKeen-Malcolm meetings Pfizer had licensed Bristol, Squibb and Upjohn under the Conover patent. It did this without the knowledge of Cyanamid, and this negates any inference of a side agreement to exclude competitors.

The court has therefore been unable to find from a preponderance of the evidence that conspiratorial agreements forbidden by Sections 1 and 2 of the Sherman Act were in

fact entered into at the McKeen-Malcolm meetings. On the contrary, the court has concluded that the agreements reached were fully expressed in the formal documents thereafter executed and that these agreements were the result of arms-length bargaining which reflected the relative bargaining strength of each company and the independent judgments of their chief executive officers.

[Footnote 15. In these times when the innermost secrets of large corporations and indeed the government itself are routinely publicized in the news media the court has deemed it significant that the federal government in the prior proceedings and the State of North Carolina in this case have failed to produce a single witness to give any direct evidence of the existence of a conspiracy. Of the thousands of employees of these five large defendant companies over the last twenty years it would seem that at least one disgruntled former employee might have been located who would be willing to come forward and pinpoint some wrongdoing on the part of at least one of the defendants. No such witness has appeared. On the contrary several former employees came and testified freely for defendants and corroborated fully the testimony of their chief executive officers.]

The Patent Issue

[Footnote 16. On remand of the F. T. C. case by the Sixth Circuit the testimony of the Patent Examiner, Herbert J. Lidoff, was taken, and the Commission affirmed a finding by the Hearing Examiner that the acts and practices of Pfizer and Cyanamid before the Patent Office constituted unfair methods of competition within the purview of the Federal Trade Commission Act. This decision was affirmed by the Sixth Circuit in Charles Pfizer & Co. v. F.T.C., 401 F.2d 574 (1968), cert. denied, 394 U.S. 920 (1969). On the basis of this decision the plaintiff here just prior to the trial moved for partial summary judgment on the patent issue on the ground of collateral estoppel, asserting that the doctrine as now recognized in Blonder-Tongue Laboratories, Inc., v. University of Illinois Foundation, 402 U.S. 313 (1971), should be extended to cover the use of collateral estoppel offensively by an antitrust plaintiff against a patentee. The argument was rejected by this court and the motion was denied.]

The plaintiff has placed great reliance on the charge that Pfizer and Cyanamid practiced fraud on the Patent Office in obtaining the issuance of the Conover patent on tetracycline and that Bristol, Squibb and Upjohn later accepted licenses under the patent with knowledge of the

fraud. It is, of course, well settled that

> "those who have applications pending with the Patent Office or who are parties to Patent Office proceedings have an uncompromising duty to report to it all facts concerning possible fraud or inequitableness underlying the applications in issue. * * * Public interest demands that all facts relevant to such matters be submitted formally or informally to the Patent Office, which can then pass upon the sufficiency of the evidence. Only in this way can that agency act to safeguard the public in the first instance agains t fraudulent patent monopolies." Precision Instrument Manufacturing Company v. Automotive Maintenance Machine Company, 324 U.S. 806 (1945).

And in this same litigation the Sixth Circuit has stated:

> "The Patent Office, not having testing facilities of its own, must rely upon information furnished by applicants and their attorneys. Pfizer and Cyanamid, like all other applicants, stood before the Patent Office in a confidential relationship and owed the obligation of frank and truthful disclosure." Charles Pfizer and Co., Inc., v. F.T.C.

401 F.2d 574, 579 (6th Cir. 1968), cert. denied, 394 U.S. 920 (1969).

That a finding of fraud will support a treble damage action under the Sherman Act if all the other elements of a cause of action thereunder are found is equally well settled. Walker Process Equipment, Inc., v. Food Machinery and Chemical Company, 382 U.S. 172 (1965).

As is frequently the case, the difficulty arises when the task of applying these settled principles to a given fact situation is faced.

> "The concept of misrepresentation as applied to patent infringement cases admits to no fixed parameters and promulgates no specific dogma. At best it is an abbreviated expression of basic equitable maxims inherent in the law of patents; a recognition that a part of the quid pro quo for the acquisition of a patent monopoly is an insistence that the circumstances surrounding the application for the patent be 'free from fraud and other inequitable conduct.' Precision

Co. v. Automotive Co., supra, 324 U.S. 806, 816 (1945)." Monsanto Company v. Rohm & Haas Company, 456 F.2d 592, 597-8 (3rd Cir. 1972).

In performing this task a review of the events which occurred following the rejection by Patient Examiner Lidoff in November, 1954 of all claims to the product tetracycline is therefore necessary.

When the Conover patent was returned to ex parte prosecution following these rejections Pfizer's patent counsel, who strongly believed the reasons assigned by the Examiner to be unsound in law, almost immediately sought an interview with him and endeavored to convince him of his error. However, Lidoff persisted in his position that tetracycline was inherently co-produced along with Aureomycin in the practice of Cyanamid's Duggar and Niedercorn patents and was therefore unpatentable over Aureomycin.

[Footnote 17. Four patent experts, including one called by the plaintiff, and several patent attorneys testified that the prior accidental and unrecognized co-production of small amounts of tetracycline with Aureomycin did not render the claim to tetracycline unpatentable. A review of their testimony and the applicable law, e.g. Kuehmsted v. Farben- fabriken, 179 F. 701 (7th Cir. 1910), cert.denied, 220 U.S. 622 (1910), and Parke, Davis & Co. v. H. K. Mulford Co., 189 F. 95 (C.C.S.D. N.Y. 1911), aff'd in part, reveresed in part on other grounds, 196 F. 496 (2nd Cir. 1912) (curiously cited by Lidoff in support of his rejction), and numerous others have served to establish to the satisfaction of this court the proposition that "novelty is not negatived by an prior accidental occurrence or production, the character and function of which was not recognized until later than the date of the patented invention sought to be anticipated thereby," 1 Walker, patents 6th Ed., Sec. 106, and that Lidoff was indeed wrong.]

He required that additional experiments be conducted either to prove or disprove the "speculated basis" of his rejection.

These experiments were conducted forthwith and the results were reported by Ptizer's attorneys in affidavits and a written summary of interviews with the Examiner. In substance they informed him

that if any tetracycline was present in the Aureomycin-producing broths, the amount was minuscule and that in any event it was understood by them that the Examiner was not interested in "useless trace amounts" of tetracycline which might be present in the broths.

[Footnote 18. The amendment filed following a meeting with the Examiner on November 29, 1954, contained these statements:

> "While applicant's counsel did not concede that there is any necessity for such a showing [the non-existence of tetracycline "in a clearly identifiable form according to present-day efficient methods for the separation thereof from fermentation broths"], he ventured the opinion that it could be made and stated that he would explore the matter in view of the great urgency of this case. The Examiner made it clear that he would not insist on a categorical averment that the fermentation broths prepared according to cited patents contained no tetracycline whatsoever. He evidently appreciates the impossibility of proving its non-existence and is not concerned about useless trace amounts which cannot be separated from the broths by methods now recommended for recovery of the new antibiotic."]

Another conference with the Examiner followed on December 8, 1954, and the next day a notice of allowance of the patent was mailed. On January 11, 1955, the patent issued.

It is now abundantly clear that the presence of at least some tetracycline in the Aureomycin broths was known by scientists, and indeed was disclosed by documents in patent applications then pending before Examiner Lidoff, at the time Pfizer's final affidavits were submitted, but there is no evidence whatever that it has ever been detected in the product Aureomycin in sufficient quantitites to impart the therapeutic qualities of tetracycline to it. Plaintiff insists, however, that the presence of any amount of tetracycline, however small, in the fermentation broths would have sufficed to preclude allowance of the patent by

Examiner Lidoff.

[Footnote 19. The parties seemed to agree that if Pfizer's agents knew this was Lidoff's view, a failure to report even a trace amount of tetracycline in the fermentation broths would have constituted a wrongful withholding of material information notwithstanding Lidoff may have been in error and the patent might ultimately have issued as a result of an appeal. See Transcript, Vol. 57, pp. 7217-19.]

To drive home this point plaintiff has introduced several hundred pages of testimony given by Examiner Lidoff in the F. T. C. proceeding following remand of that case by the Sixth Circuit in American Cyanamid Company v. F. T. C. , 363 F.2d 757 (1966), and later by way of deposition.

Aside from the questionable admissibility of this testimony,

[Footnote 20. The admissibility of Lidoff's testimony was sharply contested by defendants at the trial, primarily on the grounds that a quasi-judicial officer may not testify as to his mental processes in making a decision and the speculative and untrustworthy nature of the testimony itself. The objections were overruled, but the court is still concerned as to the correctness of the ruling in the light of

United States v. Morgan, 313 U.S. 409 (1941). See W. R. Grace and Company v. Park Manufacturing Company, ____F.Supp.____, 181 U.S.P.Q. 490 (E.D.Ill. 1974).

And with characteristic and commendable candor counsel for plaintiff has conceded that Lidoff's testimony is the sine qua non of plaintiff's charge of fraud on the Patent Office.

THE COURT: Without the testimony of Lidoff do you agree that reasonable minds could differ on the interpretation of the patent record?

MR. BENOY: Well, without Lidoff being there, I would have to say reasonable minds could differ because we have opposed findings.

* * *

THE COURT: Next question: Does your case on the patent issue, the, (assuming) that reasonable minds could differ on the record without his testimony depend first upon the admissibility of the Lidoff testimony and second its believability?

MR. BENOY: Well, given the assumption that reasonable minds could differ on the evidence it just has to follow, yes, sir, that it is crucial to

the case. I would not contend otherwise.]

the court has found it lacking in that degree of probative force necessary to carry plaintiff's heavy burden of establishing fraud by "clear, unequivocal and convincing" evidence, a standard which all parties agree applies here.

[Footnote 2]. "Fraud or unclean hands are not to be lightly inferred. They must be established by 'clear, unequivocal and convincing' evidence. Becton-Dickinson & Co. v. Robert P. Scherer Corporation, 106 F.Supp. 665, 671 (E.D.Mich. 1952), aff'd, 211 F.2d 835 (6th Cir. 1954). See also Scott Paper Company v. Ft. Howard Paper Co., 432 F.2d 1198, 1204 (7th Cir. 1970), cert. denied, 401 U.S. 913, 91 S.Ct. 882, 27 L.Ed.2d 812 (1971)."

Schnadig Corporation v. Gaines Manufacturing Company, Inc., 494 F.2d 383, 392 (6th Cir. 1974).]

Lidoff testified:

> "It is utterly impossible for me to remember any statements that I actually made at the interview. . .
>
> "As I have prefaced all my remarks, everything I have said is based on reconstruction, based upon what I think, what I thought the principles of patentability were." (Tr., Vol. 28, p. 3755)

and at another place in the record:

> "So that anything that I say as having recalled something is really a reconstruction in my mind based on what recent review of the record I have had, which has not been in any great detail, so that I cannot say that I positively recall one thing or another but I can reconstruct what my view would have been at that time." (Tr., Vol. 28, p. 3754)

Against that background the witness went on to testify that he would have been interested in whether any tetracycline

whatever was to be found in the Aureomycin broths. But the pivotal question is whether or not Pfizer's attorneys understood this to be the information the Examiner wanted, and they have testified unequivocally that they did not so understand it. Their testimony is corroborated by the summary of their interview with Lidoff filed as an amendment to the patent application (see Footnote 18). A supplemental affidavit filed by Pfizer's Dr. Bogert should also have alerted Lidoff to the fact that tetracycline was present in the fermentation broths or at least to the fact that if he were really interested in the presence of any amount of tetracycline whatever, he was obviously talking about one thing and Pfizer's representatives another.

[Footnote 22. Although he was under the duty of reading such materials before

acting on them, it may well be that Lidoff did so hurriedly in the short time which elapsed between the filing of the amendment and his issuance of the notice of allowance. It was in evidence that this particular Examiner was an unusually productive worker, and he admitted that he sometimes merely "scanned" such filings. Additionally, it appears that he was not an expert in fermentation chemistry and that his rejections had in fact been written by another Examiner, a Mrs. Wendt, with whom he did not enjoy a good personal rapport. But Lidoff's prolificacy would appear to afford no basis for his failure to read and comprehend these statements prior to the actual issuance of the patent on January 11, 1955. The same is true of an affidavit filed with him by Bristol in connection with its patent application on January 3, 1955, stating in effect that numerous samples of Aureomycin products had been found to contain two per cent to four per cent tetracycline.]

Nor does Lidoff dispute the testimony of the Pfizer agents on this score as shown by the following exchange between him and Pfizer's counsel at the hearing before the F. T. C.:

> Q: So you were satisfied to issue the patent with statements of that type in the record without even bothering to inquire?

A: If you wish to attack my action on this application, you might. It may be that had I been as sharp as Geniesse, I would not have issued this patent. But, nevertheless, I am only telling you what my impression is of what I did. Whether stupidly done or not, nevertheless this is what I did, and I took this affidavit to mean that there was no tetracycline present. Based on that I issued the patent.

* * *

Q: And their understanding of what you had in mind by the words in your rejection is what they learned from the interview with you and put in their amendment?

A: I have no control of what they understood by my words. Whatever they understood, my feeling was that this patent should not issue if the compounds were not novel. And this is the only thing that I was basing my stand on. What they understood by my words I do not know, and have no influence on at all.

Q: Do you consider that Mr. Hutz and Mr. Murphy gave you what they understood you were interested in?

A: As far as I know, I assumed that they gave me what I had asked for, but they gave me what they understood, yes. They did not give me -- well, I retract that. I don't know what they gave me with relation to what I actually wanted.

Q: But they gave you what they understood you wanted?

A: Apparently.

Q: Isn't that so?

A: Apparently so. I have no reason to believe otherwise. (Tr. Vol. 30, pp. 4024-4026)

That Pfizer had complete confidence in its patent and the actions of its representatives in procuring its issuance was further demonstrated by its action in instituting suit for its infringement against Bristol, Squibb and Upjohn on January 11, 1955, the very day on which the patent issued.

[Footnote 23. The court is informed that the validity of the patent has been brought into question in a number of cases since that time, but in only one of them was the decision stage reached. In that

case, Chas. Pfizer & Co. v. Barry-Martin Pharmaceuticals, Inc., 241 F. Supp. 191 (S.D.Fla. 1965), the Conover patent was held valid.]

That Cyanamid's experienced patent attorney, who immediately went to Washington and examined the file wrapper as soon as he heard the patent had issued, was able to find no evidence of fraud is also deemed significant on this point.

[Footnote 24. In a letter to his superior dated January 14, 1955, this attorney, Harvey W. Edelblute, stated:

> "I fail to find any evidence of deliberate concealment or falsification of facts or the misapplication of fallacious or legally unsound arguments.
>
> * * *
>
> "It is my opinion, therefore, that the Conover patent No. 2,699,054 would be held valid in a skillfully-conducted litigation before a fair-minded judge who appreciates the objectives and value of the United States patent system." (P. 3, Cyanamid Trial Exhibit 12)]

Of course this flies in the face of plaintiff's contention that Pfizer and

Cyanamid were in collusion on the patent matter all along, but the court has been unable to find that such collusion existed. There are, in fact, strong indications to the contrary.

[Footnote 25. For instance, in his letter of January 14, 1955 (see Footnote 24), Attorney Edelblute also said:

> "Following this office action an interview was granted to Conover's attorneys by the Examiner. It is, of course, not known what was said at the interview except what is stated by Conover's attorneys in an amendment filed on December 8, 1954." (P. 1, Cyanamid's Trial Exhibit 12)

In a letter from one Cyanamid official to another dated October 21, 1954, reporting the Patent Examiner's decision to reject all product claims to tetracycline it was stated:

> "We, of course, have no knowledge of what course Pfizer plans to follow. However, if we pick up any information as to their plans, we will advise you immediately. . .
>
> "It would be my guess that Pfizer will elect to issue their patent on the claims covering the deschlorination process and file a divisional application to cover the compound tetracycline and salts thereof for the purpose of appeal. . ."

And in Edelblute's letter to the same official dated October 27, 1954, it was stated:

> "The Examiner held that tetracycline as well as salts thereof are not patentable over Duggar or Niedercorn for reasons which you have read. This action, while undoubtedly very distressing to Pfizer, is of considerable comfort to Mr. Watson in his action against Bristol. Mr. Watson feels that it will be helpful in extending the scope of the Duggar patent, and he feels that it was very fortunate that we sued Bristol on our Duggar patent before the Examiner's decision was handed down.
>
> "...I have not been in touch with Pfizer's attorneys and have been advised by Mr. Behrens not to do so, and accordingly, I do not know what steps they are taking to obtain patent protection on the product..." (Pp. 2-3 , Cyanamid Exhibit 10)

If there was in fact a deal between Pfizer and Cyanamid that one or the other of them should obtain a patent on tetracycline, one wonders why the Examiner's action was not equally "distressing" to Cyanamid. Instead, it appears that Cyanamid's attorneys were taking "considerable comfort" from the action for the very good reason that if the rejection held up, it would enable Cyanamid to dominate the tetracycline field through its Duggar and Niedercorn patents.]

At best the evidence has left the court with the impression that there was a mutual misunderstanding between Lidoff and Pfizer's representatives as to what Lidoff wanted established.

[Footnote 26. Much of the controversy here has swirled around the meaning of words employed in these affidavits and summaries. Much time and many pages have been devoted to argument over the significance to be attached to such words and expressions as "appreciable","recoverable" and "clearly identifiable". But, of course,

> "[a] word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used." Justice Holmes in Towne v. Eisner, 245 U.S. 418, 425 (1918).

And having found that the evidence, regardless of how the words used by the parties are to be interpreted, falls short of establishing fraud, this court declines to enter this thicket of semasiological ambiguity.]

The court finds itself in much the same position as did the First Circuit in Nashua Corporation v. RCA Corporation, 431 F.2d

220, 227 (1970), where it said:

> "Our problem - and Nashua's - lies in the fact that the only evidence on this issue is the cryptic and technical file wrapper exchanges between the Examiner and the applicant. These exchanges are ambiguous as to precisely why the Examiner rejected the first two applications and what significance the Examiner attached to RCA's amendment of its copending '539 application and to RCA's Rule 131 affidavit. Given these critical ambiguities, we cannot say that the district court was clearly erroneous in finding no fraud on RCA's part. It is simply not sufficiently clear to us that RCA filed the affidavit realizing that its effect would be to materially misrepresent the prior art and deliberately intending such misrepresentation. Compare University of Illinois Foundation v. Blonder-Tongue Laboratories, Inc., 422 F.2d 769, 776-777 (7th Cir. 1970).
>
> "We therefore uphold the district court's finding that the filing of the Rule 131 affidavit did not constitute a fraud on the Patent Office."

The court does not suggest that inferences favorable to the plaintiff cannot be drawn from the conduct of

Pfizer's representatives before the Patent Office, and one gets the impression, in fact, that these gentlemen did not tell Lidoff any more than was absolutely necessary to satisfy him. But

> "as long as the patent applicant fulfills his 'uncompromising duty' of good faith and conducts the prosecution with utmost candor, making a frank and truthful disclosure, he is not required to 'list out the full spectrum of his knowledge to establish [his] bona fides.' Eli Lilly and Company, Inc., v. Generix Drug Sales, Inc., 460F.2d 1096,1102-1103 (5th Cir. 1972)." Schnadig Corporation v. Gaines Manufacturing Company, Inc., 494 F.2d 383, 393 (6th Cir. 1974).

And, as previously indicated, the evidence in this case is far from "clear, unequivocal and convincing" that Pfizer's representatives failed to fulfill their 'uncompromising duty'.

[Footnote 27. Also appropriate here is this language from Mueller Brass Company v. Reading Industries, Inc., 352 F.Supp. 1357, 1379-80 (E.D.Pa. 1972), aff'd without opinion, 487 F.2d 1395 (3rd Cir. 1973):

"Two conflicting principles tear at an attorney practicing before the Patent Office. One is that the proceeding is not adversary, so the attorney therefore owes a high duty of candor to the Examiner. The second is that the attorney has a duty of advocacy to his client. One should not forget in this context that the Examiner himself is or should be an advocate for the public interest and should not be too easily swayed by the applicant's attorney."

And it may not be amiss to quote the following from the same opinion:

"The fact that this court has not found fraud chargeable to plaintiff, or awarded attorneys' fees, should not be taken as placing this court's imprimatur on all of plaintiff's actions. It results more from failure of proof in otherwise suggestive circumstances, or the possibly fortuitous absence of materiality. Hopefully, the plaintiff and its attorneys will be more careful in the future in insuring that the circumstances surrounding their actions are not at all even suggestive of impropriety." [Id., p. 1382.]

Finally, notwithstanding its allegations of fraud and its agreement as to the standard of proof necessary to sustain the same, plaintiff seems to argue for the adoption of the rule of strict

liability based on the alleged negligent failure of defendants to disclose pertinent information to the Patent Office. This theory of liability was analyzed and rejected by Judge Mansfield as follows in Xerox Corporation v. Dennison Manufacturing Company, 322 F.Supp. 963, 968-9 (S.D.N.Y. 1971):

"We believe that the stringent standard urged by defendants is unnecessary to protect the public, and that an applicant for a patent should be accorded the right to exercise good faith judgment in deciding what matters are and are not of sufficient relevance and materiality to require disclosure. Only when he is guilty of fraud, willfulness or recklessness indicating a disregard for his duty of frankness should enforcement of the patent be barred. See Armour & Co. v. Wilson & Co., 274 F.2d 143 (7th Cir. 1960); Ritter v. Rohm & Haas Company, 271 F. Supp. 313 (S.D.N.Y. 1967). Furthermore, the authorities cited by defendants simply do not support their contention that mere negligent omissions of misstatements before the Patent Office would be unclean

> hands. On the contrary, they reveal that fraud or reckless disregard for the facts must be established."

This appears to be the rule in this Circuit also. Orrison v. C. Hoffberger Co., 97 F.Supp. 689 (D.Md. 1951), aff'd., 190 F.2d 787 (4th Cir. 1951).

The Sixth Circuit has taken the same view in a case just published, Schnadig Corporation v. Gaines Manufacturing Company, Inc., supra. See also Beckman Instruments, Inc., v. Chemtronics, Inc., 328 F. Supp. 1132, 1138-9 (W.D.Tex. 1971), and cases cited.

The cases relied on by plaintiff in support of its contention that no mens rea is required to establish fraud in a civil action, Charles Pfizer & Co. v. F.T.C., 401 F.2d 574 (6th Cir. 1968), cert. denied, 394 U.S. 920 (1969), and Beckman Instruments, Inc., v. Chemtronics, Inc., 428 F.2d 555 (5th Cir. 1970), are distinguishable, and

one of them, Ham v. Hart, 58 N. Mex. 550, 273 P.2d 748 (1954), has been overruled as to this point in Hockett v. Winks, 82 N.Mex. 597, 485 P.2d 353.

In sum, the evidence establishes at most that reasonable minds could differ as to the construction that should be placed on the actions of Pfizer's representatives before the Patent Office; that the experiments requested by the Patent Examiner might have been conducted more carefully or in a different manner; that the whole matter resolves itself into a conflict of opinions of experts; and that with all deference to the "reconstructed" opinions of Mr. Lidoff, the evidence favorable to the plaintiff does not rise to that level of clear, unequivocal and convincing proof necessary to support a finding of deliberate fraud. Corning Glass Works v. Anchor Hocking Glass Corporation, 253

F.Supp. 461 (D.Del. 1966), aff'd in pertinent part, 374 F.2d 473 (3rd Cir. 1967), cert. denied, 389 U.S. 826 (1967).

The Commercial Issues

Having concluded that the evidence does not support the charge of conspiracy based on secret agreements growing out of the twin nuclei of plaintiff's case, the McKeen-Malcolm meetings and the procurement of the Conover patent, there remains the task of examining all other evidence in the record to ascertain if inferences arise thereon sufficient to sustain plaintiff's restraint of trade and monopoly charges. Again we find the inferences conflicting and of insufficient force to carry plaintiff's burden of persuasion.

PRICE FIXING

As previously indicated, it is undisputed that the introductory published prices of tetracycline by Pfizer and Cyanamid were identical with their Terramycin and Aureomycin prices, and when Bristol, Squibb and Upjohn came on the market later with their brands of tetracycline, their published prices were also the same as those of Pfizer and Cyanamid. These published prices, particularly for plain tetracycline not combined with any other drug, remained the same for the period 1953 through 1960. Plaintiff argues that this shows a concert of action by defendants and that when considered with all the other evidence bearing on price behavior, it establishes beyond question the existence of a conspiracy between the defendants to fix and maintain prices in violation of the antitrust laws. At first

blush the argument would appear to have much merit, but a careful review of all the evidence shows the contrary inferences arising thereon to be of equal and in many instances of greater weight. Much of the contrary evidence was introduced (and therefore vouched for) by the plaintiff.

To understand the factors influencing price decisions in this field during the period in question reference must be made to the experience of defendants and other drug manufactures with the antibiotic, penicillin, in the 1940's. Penicillin had not been patented, and when it proved to be a very effective drug, a large number of manufacturers began to make and market it. However, because the demand for any prescription drug is limited by the number of sick people needing to be treated with it and the number of doctors who will prescribe it, the manufacturers soon found

themselves with excess production capacity and stocks.

[Footnote 28. One of the defendants here, Bristol, which had been a large manufacturer of penicillin, lost so much money that by 1953 it was in a very precarious financial condition. It was able to begin a financial comeback by getting into the tetracycline market in 1954.]

This led to a course of price cutting which soon made the manufacture and sale of penicillin non-profitable.

When the broad-spectrum antibiotics came on the market in the late 1940's and early 1950's they were patented drugs and defendants, it may reasonably be inferred, determined not to fall into the error of the penicillin manufacturers. In addition to their own experience with penicillin, the defendants also learned a valuable lesson from their experience in price cutting with the broad-spectrum antibiotics in the early days of their manufacture and sale. This experience was that a price cut

by one company was immediately met by the others with the result that they all found themselves competing for the same amount of business at lower prices. Plaintiff reads something sinister into all of this, but the court is unable to agree. The existence of valid patents gave the manufacturers of these drugs lawful monopolies, and the fact that business executives in the exercise of sound judgment reacted similarly to the same experiences and conditions should be deemed neither surprising nor illegal.

[Footnote 29. Plaintiff seems to complain that defendants did not again follow the penicillin route, and certainly this would have resulted in reduced prices to consumers of these drugs. But these executives were responsible to their stockholders, and it was their duty to adopt policies and follow courses designed to result in profitable operations for their respective companies. And one may wonder if it is really in the public interest for competition to be maintained with such cutthroat intensity in a business such as the pharmaceutical industry as to result in a curtailment of research and development programs designed to produce

new and more beneficial drugs. The question is, of course, more properly addressed to the economists and law makers, our task here being simply to ascertain if the plaintiff has made a case under the antitrust laws.]

> "In deciding whether evidence of defendant's conduct can reasonably support an inference of conspiracy, there must be more than mere general similarities; there must be a sameness of conduct under circumstances which logically suggest joint agreement, as distinguished from individual action. Proof of parallel business conduct is not a substitute for proof of conspiracy, and similar conduct, as such, does not establish conspiracy. Theatre Enterprises, Inc., v. Paramount, 1954, 346 U.S. 537, 74 S.Ct. 257, 98 L.Ed. 273. As stated in United States v. Borden Co., D.C.N.D.Ill. 1953, 111 F.Supp. 562, 579: 'Reasonable businessmen will act similarly when presented with the same problem.' The antitrust laws were not meant to prohibit businessmen from adopting sound business policies merely because competitors had already adopted the same or a similar policy.
>
> "An inference of conspiracy is permissible only where the conduct was adopted by a competitor 'in apparent contradiction to its own self-interest'. Milgram v. Loew's,

Inc., 3 Cir., 1951, 192 F.2d 579, 583. An inference of conspiracy would only arise from similar business conduct if it appeared more to the interest of competitors to adopt different practices. Chorak v. RKO Radio Pictures, 9 Cir. 1952, 196 F.2d 225, 229, cert. denied, 1952, 344 U. S. 887, 73 S.Ct. 329, 97 L.Ed. 702." Independent Iron Works, Inc., v. United States Steel Corp., 177 F. Supp. 743, 746-7 (N.D.Cal. 1959), aff'd, 322 F.2d 656 (9th Cir. 1963), cert. denied, 375 U.S. 922 (1963).

It will be remembered that during all of the period under consideration, 1953 - 1961, Parke, Davis & Company was selling its broad spectrum antibiotic, Chloromycetin, at prices identical with those being charged by defendants for their broad-spectrums. Yet it has never been charged that Parke, Davis was involved in the conspiracy. Plaintiff would explain this by saying that Parke, Davis was engaged in "conscious parallelism" and not collusion - that it was simply getting a "free ride". Defendants on the other hand

insist that the uniformity of prices was the expression of "oligopolistic price behavior".

[Footnote 30. "The term 'oligopoly' describes a market in which the sellers are few enough for sensible market strategy to require that the probable reactions of competitors to changes in price and output be taken into account. In practice this is a very typical market situation in modern industry and trade." Neale, The Antitrust Laws of the U.S.A., 2nd Ed. p. 48.

Plaintiff here concedes that this market was one in which oligopolistic behavior might be expected.

"Plaintiff agrees as to the homogeniety or substitutability of defendants' BSA products, and will agree the record shows them to be almost perfect substitutes. Also, plaintiff agrees that the size distribution of the sellers indicates that the market could be characterized as a 'small numbers' homogenous oligopoly (see F. M. Scherer, Industrial Market Structure and Economic Performance, p. 10). Given the knowledge of these conditions and nothing else, most antitrust attorneys and economists would agree that price stability on the order of the 1954-60 tetracycline prices might result." Plaintiff's reply brief, pp. 24-25.]

While the resolution of this question is always fraught with difficulty,

> [Footnote 31. "To distinguish between informed oligopoly and collusion as the cause of damped-down price competition is the most difficult task that the courts have to face in this field, given that they must give due weight to normal legal safeguards in favour of the defendant and yet avoid being deceived by merely specious arguments. It would not be claimed that they never make a mistake in this task. Indeed, the distinction is not always hard and fast; one can imagine situations in which it would be genuinely difficult even for the businessman himself to say whether he was acting from individual prudence or under the suasion of a common understanding. Inevitably the courts are criticized from both sides." Neale, The Antitrust Laws of the U.S.A., 2nd Ed. p. 48.]

in any view of the matter the parallel pricing actions of Parke, Davis and the defendants must be regarded as strong evidence that no conspiracy existed.

> [Footnote 32. Testimony given in one of the prior cases by Harry J. Loynd, chief executive of Parke, Davis & Company, explained why that company's policies were adopted. He testified that the policies of Parke, Davis were adopted independently without consultation with any other company, and his testimony concerning the

> broad-spectrum antibiotic market was corroborative of that of the defendants' officials on this subject. Tr. Vol. 46, pp. 5981-84, 6004-05, 6034-35.]

Plaintiff has conceded that "pure price uniformity, standing alone, can be justified by the laws of economics, or by a theory of price leadership", and that "other factors must be proven". (Plaintiff's brief, Appendix A, p. 31.)

The identity of list prices of the defendants (and Parke, Davis) prevailed principally in the prescription market which accounted for approximately eighty-five per cent of the total sales of tetracycline. While there were numerous instances of identical bidding on contracts to supply the drug to public and private hospitals, the record is replete with evidence that defendants did regularly compete, sometimes intensely, for this business. This was done through the use of "free goods" and other inducements offered

to get the business.

[Footnote 33. "Free goods" is merchandise furnished without charge in addition to that purchased and shown on the invoice at the list price. The result to the purchaser, of course, is a reduction in the overall price paid.]

It would unnecessarily prolong this opinion to recount this evidence, but some typical examples are shown in the margin.

[Footnote 34. The following are illustrative excerpts from salesmen's reports on competitive price cutting and free goods transactions:

"Neither Pfizer nor Lederle will knowingly be undersold by the other." (Squibb Exhibit 189)

"We just lost the business at Presbyterian Hospital . . . rough competition." (Squibb Exhibit 243)

"Hopkins have been purchasing all of the tetracycline that they use from Pfizer, at a most ridiculous price . . . I wonder if we are on the verge of another price war?" (Squibb Exhibit 266)

"Wow! When is it going to stop?" (Squibb Exhibit 317)

"The hospital received another 200 vials of IM from Lederle as free goods." (Bristol Exhibit 50)

"The hospital is getting sixty per cent in free goods from Iederle and Pfizer on tetracycline." (Bristol Exhibit 51)

"The most active competitor on tetracycline in our region has been the Charles Pfizer Company." (Plaintiff's Exhibit 787)

"As much is being given away as is sold. The book price is recognized as pure fiction." (Plaintiff's Exhibit 788)

"Bristol continues to raid Chicago." (Cyanamid Exhibit 155)

"Squibbs and Bristol leads [sic] the parade with a low of fifty per cent in free goods on 'tetracycline'." (Plaintiff's Exhibit 799)

"Various amounts of materials being given from trunks of cars." (Plaintiff's Exhibit 764)

"In view of highly competitive..." (Plaintiff's Exhibit 795)

In a report a Lederle agent complained of Pfizer's "blitzing", accusing Pfizer of wanting all the business, "entertaining doctors by the dozen". (Plaintiff's Exhibit 800)

"Pfizer is sponsoring golf tournaments for St. Elizabeth's Hospital ... One of Pfizer's salesmen in the Maine area has been generous not only with the hospitals, but with druggists as well in the way of free

goods... So far Squibb's efforts have only been in the very large hospitals, but they have not made any progress... Bristol has been most active in the Buffalo area and generally it is someone from management that sets up a deal through an account... Upjohn is just getting into the act in hospitals in an effort to get Panmycin established, but so far have not been as rough as Pfizer. This company is very generous with samples in the doctor's office, particularly with their readimix product... In the long run we have to meet competition but I think your policy of keeping a cool head is a good one at present." (Cyanamid Exhibit 40 dated May, 1955)

"In my opinion, the Achromycin situation is becoming more serious day by day as our competitors continue to whittle away at key county, city and state institutions by bidding two percent less than ourselves or by allowing their accounts to under-bid the $22.49 price..." (Cyanamid Exhibit 42)]

It was in evidence that it is not unusual in the drug business for prices to remain steady for as long as seven years, and in this case the evidence shows that after 1960 substantial declines in prices charged by defendants for tetracycline began to appear. Plaintiff would argue

that this affords an unmistakable inference of collusion in the earlier years, but the court is unable to agree.

[Footnote 35. Plaintiff prepared and submitted a "scatter chart" (Plaintiff's Exhibit 999), showing that these price declines were much more pronounced for tetracycline than for more than one hundred other drugs. Plaintiff argues that some abnormal force namely, a conspiracy must have been at work to produce this result. These declines have been adequately explained by defendants and their economists (with whom Plaintiff's economist was in basic agreement) as having been caused by the appearance on the market of new "medium spectrum" antibiotics and the growth of generic prescribing of tetracycline. And, of course, the possibility that the Kefauver Committee hearings had an impact cannot be discounted. Even so, the decline in prices of the combination tetracycline products which constituted by far the greater portion of tetracycline sold in the 1960's did not vary appreciably from the declines experienced by other drugs during that period.]

EXCLUSION OF COMPETITORS

Plaintiff's charge that the defendants engaged in a conspiracy to exclude competitors is not supported by the evidence. As we have seen, there was no

such express agreement between Pfizer and Cyanamid coming out of the McKeen-Malcolm meetings, nor is such inference to be drawn from the fact that the patent interference was settled. Faced with a similar contention in Hutzler Bros. Co. v. Sales Affiliates, Inc., 164 F.2d 260 (1947), Judge Dobie, writing for the Fourth Circuit, said:

> "We cannot attach, as defendants seem to suggest, any ulterior motives, or any improper conduct, to plaintiffs in connection with the agreed settlement with Bohemen in the interfernce proceedings. Had the interference proceedings been prosecuted to final judgment, this would have unquestionably delayed the granting of the patent in suit. There were ample business reasons for a friendly settlement. And there was evidence to show that this settlement was recommended by Bohemen's attorney after a review of the proofs of the priority of Evans and McDonough." Id.at p. 267.

Other actions taken by the defendants and relied upon by plaintiff to establish

conspiracy are seen upon close analysis to have been equally consistent with the lawful exercise of sound business judgment. Reference to a few of such actions will suffice to demonstrate the point:

(1) Bristol's decision to sell tetracycline in bulk was based on its recognition that it could not with its comparatively small sales force compete successfully with the much larger companies like Pfizer and Cyanamid without selling its product in bulk. Its decision to sell to just two customers, Squibb and Upjohn, was in line with its ultimate objective of becoming a substantial seller under its own label. The more bulk customers Bristol had, the more competitors its own brand of tetracycline would have. These decisions were made by Bristol in 1954 at a time when it is not alleged to have been conspiring with anyone.

(2) The negotiations leading to the acquisition of Heyden's Antibiotic Division by Cyanamid were initiated not by Cyanamid but by Heyden and these negotiations were instituted before the McKeen-Malcolm meetings took place. While the Minieri patent was held out by Heyden "as bait", evidence is lacking that it constituted much of an inducement ot Cyanamid to purchase. On the contrary Dr. Malcolm reasoned that Minieri's product claims were foreclosed by Cyanamid's Duggar-Niedercorn patents, and there was ample evidence to support the bona fides of this transaction. There is no evidence that Pfizer had anything to do with it.

(3) The settlement in December, 1954, of the infringement suit brought by Cyanamid against Bristol occurred a year before Bristol is alleged to have joined the conspiracy allegedly existing at that

time between Pfizer and Cyanamid. The negotiations leading to the settlement were initiated by Bristol's President, and there is no evidence that Pfizer had any part of the prosecution or settlement of the suit. It occurred at a time when Cyanamid had reason to believe Pfizer would not obtain a patent on tetracycline. Dr. Malcolm testified that after satisfying himself that Bristol was indeed infringing the Duggar patent, he concluded to settle for a reasonable royalty in order to avoid long, drawn-out and expensive litigation. The testimony is uncontradicted.

(4) It is undeniable that the suits instituted by Pfizer against Bristol, Squibb and Upjohn on the very day its patent issued

[Footnote 36. The Conover patent file wrapper (p.65) indicates that Pfizer's attorneys had requested a deferment of the issuance of the patent until January 11, 1955, and this may have been for the purpose of allowing the attorneys to

prepare the suit papers which Pfizer had promised Bristol it would file immediately upon the issuance of the patent.]

were adversary in every sense of the word and that they were bitterly contested by the defendants. It seems equally clear that the settlements reached following the "Broady incident" reflected the exercise of sound business judgment and were not the result of any collusive agreements. It was not shown that Cyanamid had any part in the prosecution of these suits or the settlements. Bristol recognized the merit in Pfizer's position by agreeing to pay back royalties. By settling it avoided a possible liability exceeding fifty million dollars. Squibb and Upjohn demonstrated their lack of faith in their ultimate chances of success by exacting from Bristol under threat of cancelling their bulk purchase agreements, an agreement to indemnify them against loss in the event

Pfizer prevailed - the reverse of the indemnity agreement previously in effect between them.

[Footnote 37. The attorneys for all defendants counseled the settlement. The uncertainties of patent litigation were summed up by Squibb's attorney who, after listing several considerations which prompted his recommendation, said:

> "So you had all those considerations and I cannot see that there are any firm views by anybody as to whether we would win or lose. It is a situation that I have characterized in the past as rolling dice in the halls of justice. That is where we were." (Tr. Vol. 44, p. 5705)

Plaintiff's strongly urged contention that Bristol, Squibb and Upjohn knew they could win these suits but settled anyway is simply not consonant with the realities which face all parties in complex patent litigation.]

And Bristol's action following the settlement in filing with the court all the depositions it had taken containing damaging evidence against Pfizer rather than retaining these in its files as it might have done, is corroborative of its

position that it had nothing to hide.

(5) The contention strongly urged by plaintiff that a statement reported to have been made by Pfizer's McKeen at a meeting of security analysts held at Pfizer's Brooklyn plant is an admission that Pfizer and Cyanamid had agreed to exclude competition is not impressive. Whether the statement was actually made and if so, whether it was properly admissible in evidence against Pfizer are questions not free from doubt. Be these things as they may, however, it is simply not realistic to suggest that a sophisticated business executive who would enter into a conspiratorial agreement would call a press conference to announce it.

MONOPOLIZATION

What has been said in disposing of the patent and the restraint of trade issues renders unnecessary further extended discussion of plaintiff's Section 2 Sherman Act charges of monopolization against all defendants and the charge of attempt to monopolize made against Pfizer alone. Suffice it to say with respect to all defendants that the court has not found the charges sustained by the greater weight of the evidence. With respect to the unilateral monopolization charge against Pfizer, in addition to its failure to prove that Pfizer procured the Conover patent by fraud or that it misused a valid patent, plaintiff has failed to establish the essential elements of an attempt to monopolize. See Smith, "Attempt to Monopolize: Its Elements and Their

Definition", 27 Geo. Wash. L. Rev. 227 (1958).

ADDITIONAL FINDINGS

In addition to the findings set forth herein the court adopts as its own the following proposed findings of fact submitted by the parties:

1. Plaintiff's proposed findings 1 - 10 inclusive filed February 8, 1974.

A. BACKGROUND TO THE VIOLATIONS ALLEGED

(1) ANTIBIOTICS

PROPOSED FINDING 1:

Antibiotics are substances used for the treatment or prevention of disease. These substances compete with each other for the physicians' demands in treatment of diseases which are susceptible to some or all antibiotics. The extent of competition between specific antibiotics depends upon the extent to which the particular product has been advertised and promoted to the medical profession, the range of susceptibility of disease causing organisms to the various antibiotics, the extent to which the medical profession or individual physicians might prefer one antibiotic to another antibiotic either from a therapeutic standpoint or from ease and convenience of administration, the

prevalence of undesirable side effects resulting from usage of certain antibiotics, or from purely personal reasons attributable to individual physicians.

(2) PENICILLIN

PROPOSED FINDING 2:

The first major antibiotic discovered and introduced was penicillin which was used extensively during World War II and thereafter.

Subsequent to the introduction of penicillin, additional antibiotics were discovered. Four of these were effective against a wider group of disease-causing micro-organisms than was penicillin and other antibiotics and became known as "broad spectrum" antibiotics. These broad spectrum antibiotics were the following: chlortetracycline, which was introduced in

1948 by Cyanamid under the trade name Aureomycin; chloramphenicol, which was the first marketed in 1949 by Parke, Davis and Company under the trade name Chloromycetin; oxytetracycline, which was introduced in 1950 by Pfizer under the trade name Terramycin; and tetracycline which was introduced at varying dates in 1953 and 1954 by the five defendants each having its own distinct trade name. The patent covering the product Aureomycin is the Duggar patent, U.S. Patent 2,482,055. The Niedercorn patent, U.S. Patent 2,609,329, is an improvement patent on a process for producing Aureomycin. The Terramycin patent, U.S. Patent 2,516,080, was issued to Pfizer in March 1950 and is also sometimes referred to as the Sobin patent, as he was the applicant for the patent.

PROPOSED FINDING 3:

During and subsequent to World War II, many companies entered the penicillin industry and "price wars" broke out. The price of penicillin declined repeatedly. The penicillin industry came to be characterized by very competitive and low prices to all classes of customers, undertain profits, or even losses, and attrition among producers.

PROPOSED FINDING 4:

Basic penicillin as such was not patented. Aureomycin and Terramycin were patented by defendants Cyanamid and Pfizer respectively. No other company has been licensed by Cyanamid to sell Aureomycin as such in the United States. Pfizer has been licensed to manufacture Aureomycin for the purpose of converting it to tetracycline, and Bristol has been licensed to produce up

to 6% Aureomycin in the production of tetracycline and to sell tetracycline containing not more than 6% Aureomycin. No company has been licensed by Pfizer to produce or sell Terramycin in the United States. Both defendants Cyanamid and Pfizer as a result of their patents have had, therefore, a complete monopoly of the production and sale of Aureomycin and Terramycin, respectively, since the introduction of these antibiotics.

PROPOSED FINDING 5:

Aureomycin and Terramycin are substances produced by certain micro-organisms. Tetracycline is produced both by chemical transformation of Aureomycin, and by micro-organisms. These substances have the capacity to inhibit the growth of infectious and disease producing micro-organisms and to destroy them. Aureomycin,

Terramycin and tetracycline are substances of vital and unique importance to the health and welfare of the general public.

These antibiotics are produced as a result of large scale fermentations of micro-organisms, sometimes familiarly called "bugs". For commercial purposes, these micro-organisms are allowed to develop and grow in large vats, 20,000 gallon vats not being unusual, containing various types of nutrient media specially designed or known to cause rapid and large growth of the micro-organism. After the growth has continued for a few hours or days to the point where experience has taught that the most satisfactory yield of antibiotic can be obtained, the fermentation is stopped. Thereafter the antibiotic is harvested from the broth or beer. The method of accomplishing this is to selectively separate the antibiotic

from the broth leaving behind as much impurities or "gunk", which accumulates during the fermentation, as is possible. After further purification efforts, a usable product results. This compound is then processed, mixed with other materials or other antibiotics, and packaged in many different package sizes and dosage forms. The dosage forms vary depending on the amount of antibiotic per dosage; e.g. 250 mg. capsules, 125 mg. capsules, 100 mg. capsules or 50 mg. capsules. This gives the physician ample dosage forms for various types of patients and diseases.

Aureomycin and Terramycin are both made by the procedures very briefly outlined above. Tetracycline is also made in this fashion.

In addition, tetracycline can be made by subjecting Aureomycin (obtained by fermentation) to mild hydrogenation in the

presence of a catalyst, e.g. palladium. This hydrogenation removes a chlorine atom from the basic Aureomycin molecules and the resulting product is tetracycline.

PROPOSED FINDING 6:

Tetracycline, Aureomycin and Terramycin are products which can only be obtained by the ultimate consumer or patient, by authority or prescription issued by a physician. Tetracycline is customarily prescribed by the physician under one of the five defendants' brand names. These antibiotics are not products which are generally available to consumers as are other products in general commercial usage. It is the physician's prescription which determines the amount and brand of drug which the pharmacist will sell.

PROPOSED FINDING 7:

Tetracycline, Aureomycin and Terramycin are antibiotic substances which can be used by the medical profession for the treatment and cure of the same diseases. These antibiotic substances, therefore, are directly competitive. While these antibiotics do differ slightly in chemical structure they are standard products having the same commercial use and are marketed in identical dosage forms and package sizes with few minor exceptions.

PROPOSED FINDING 8:

Tetracycline and in some instances Aureomycin and Terramycin have been combined with various additives such as sodium metaphosphate, citric acid, ascorbic acid, xylocaine, procaine and others and has been made available in hydrochloride or phosphate salts. These additives or salts, while perhaps differing from each other

from a pharmacological standpoint, do not change the basic form of the tetracycline which remains the basis of the therapeutic value of such combinations.

The addition of these various substances is made for the purpose of attempting to raise the blood level of the antibiotic, shorten the time necessary to achieve higher blood levels, extend the period of the higher blood levels and add a sedative to the drug to alleviate pain or discomfort resulting from administration. In addition these antibiotics have been combined with vitamins (S.F. or stress formula) and with other antibiotics (Pfizer's Signemycin) and with antifungal agents (Squibb's Mysteclin). These various dosage forms are, with minor differences, identical and are competitive each with the other.

PROPOSED FINDING 9:

Tetracycline is marketed in substantially identical dosage forms by each defendant. The oral dosage forms are the most important dosage forms in terms of dollar volume of sales. The oral dosage forms consist of capsules and tablets, and liquids such as suspensions, syrups and pediatric drops. The injectible dosage forms are next in importance in terms of dollar volume of sales. The remaining dosage forms such as ointments, sprays, troches, powders, soluble tablets, otics, etc., are comparatively unimportant commercially. All defendants market the significant, or large volume, dosage forms in identical package sizes.

B. RELEVANT MARKET STRUCTURE

PROPOSED FINDING 10:

The market for antibiotics consists of

five classes of customers and the prices charged each customer class by all defendants depends upon the classification into which each customer falls.

(a) Retailers--This class of customer consists of the retail drug pharmacies throughout the United States to whom defendants sell their products direct. These pharmacies, in turn, dispense the antibiotics to the consuming public as a result of prescriptions by physicians presented to the drug pharmacists and are the source from which the public obtains these antibiotics involved in the proceeding. In some instances, retail pharmacies, in addition to selling to the consuming public, sell to city, county and state hospitals and non-profit association hospitals.

(b) Drug wholesalers--This class of customer purchases antibiotics direct from

the manufacturers thereof and, in turn, resell the antibiotics to the retail pharmacies throughout the United States. In addition, drug wholesalers in some instances sell antibiotics to city, county and state hospitals, non-profit association hospitals and to some federal institutions.

(c) City, county and state hospitals (hereinafter called CCS hospitals)--This class of customer consists of tax-supported hospitals operated either by cities, counties or states throughout the United States. Purchases by this class of customer are made by purchasing agents or hospital pharmacists or, in many instances, by agencies of the state, city or county which purchase antibiotics for a number of institutions operating within the political sub-division. Purchases by this class of customer are made in two fashions: first, as a result of requests for the submission

of formal bids which are sent to the manufacturers and local wholesalers and retailers; second, by direct order from the manufacturers, retailers or wholesalers without the submission of bids.

(d) Federal Government--This class of customer consists of all the various agencies who purchase antibiotics for use in federally operated hospitals and clinics. Included in this class of customer are the Veterans Administration (V.A.), General Services Administration (G.S.A.), the District of Columbia Government, United States Public Health Service, and the Military Medical Supply Agency (M.M.S.A.). The M.M.S.A., who purchases for the three armed services, is the largest single purchaser of these products.

Purchases of drugs by this class of customer are made in several manners. All,

from time to time, ask for the submission of prices. This can be done on a formal secret bid request basis or a less formal request for bids with the prices submitted open to further negotiation between representatives of the agency and the suppliers. G.S.A. requests prices and these are then incorporated in to the G.S.A. schedules and distributed to the various agencies purchasing from the G.S.A. schedule. In addition many hospitals, particularly V.A. hospitals, purchase drugs direct from a manufacturer without regard to V.A. or G.S.A. price schedules. V.A. regularly uses this type of "decentralized" contract instead of its "depot" contract where a bid is let to a particular supplier for delivery to the various V.A. warehouses. On a depot award, the hospitals order from the V.A. warehouse and not from the manufacturers.

Generally federal institutions deal directly with the manufacturers of these drugs and not local wholesalers or retailers.

(e) Non-Profit Associations (NPA)-- This class of customer consists of hospitals and other institutions such as clinics which are privately owned and operated whether for profit or not. Purchases by this class of customer are usually made from the manufacturer, wholesaler or retailer on a negotiation basis or on a regular order basis. Some larger NPA institutions do, however, from time to time request the submission of bids.

In addition, some defendants, e.g. Upjohn, make some insignificant sales of these drugs direct to physicians for dispensing to patients.

2. Pfizer's proposed findings of fact (A) 1-45 inclusive and (B) 1-79 inclusive relating to the commercial issues and proposed findings 1-69 inclusive relating to the patent issues, all filed October 16, 1973.

Pfizer's Policy of Attempting to Keep Its Discoveries to Itself Was An Independent Business Decision Which Was Adopted Years Before Any Alleged Conspiracy.

1. Prior to World War II, Pfizer was a manufacturer of fine chemicals which were sold in bulk, through a small sales force, to food, beverage and pharmaceutical manufacturers for use in their own manufacturing processes. These manufacturers would use the material purchased from Pfizer as an ingredient in their finished product, or they would relabel the material for sale under their own name. In either event, Pfizer's identity was completely lost in the finished product. Pfizer offered no finished drugs to the medical profession.

2. During World War II, the government asked Pfizer to help in the development of penicillin because of its knowledge concerning the production of chemicals by

fermentation. Pfizer manufactured penicillin and streptomycin during this period, but again, these antibiotics were sold in bulk or unlabeled bottles to other manufacturers, and Pfizer's identity was completely lost in the finished product. Pfizer was still virtually unknown to doctors, hospitals, or drug wholesalers or retailers.

3. Their experience with penicillin and streptomycin led Pfizer to become interested generally in antibiotics. In 1946 Pfizer built a research facility and pilot plant in Brooklyn in order to search for new antibiotics. In 1949 Pfizer discovered the broad spectrum antibiotic Terramycin, and in 1950 received a patent on the product. Pfizer viewed Terramycin as its "golden opportunity" to enter the pharmaceutical business by producing prescription drugs under its own label, and marketing them in the channels of the drug trade.

4. Pfizer's entry into the pharmaceutical business under its own label required a substantial financial commitment and certain risks. Pfizer had to build a marketing organization consisting of several hundred salesmen, a marketing staff to back them, a medical staff to advise them, and conduct clinical studies, and a physical distribution system throughout the country. Additionally, a substantial commitment to additional product research was required so that the success of the company was not dependent solely on

Terramycin. Pfizer also faced direct competition from pharmaceutical houses in the field, with the established facilities and organization that Pfizer would have to build to compete.

5. Despite the substantial financial commitment required, and the obvious risks involved, Pfizer management decided to use Terramycin as a vehicle to enter the pharmaceutical field. Concomitant with this decision, Pfizer also decided not to sell Terramycin in bulk or grant manufacturing licenses to others. It was decided that Terramycin, as well as any future discoveries made by Pfizer scientists, would be kept as specialty products for the Pfizer marketing division in order to ensure the company's growth and viability around the world.

6. At the same time, Pfizer decided to considerably expand their research facilities in an effort to discover other drugs which, along with Terramycin, would become specialties so Pfizer could compete with the more established, multi-product pharmaceutical firms.

Although Pfizer Discovered Tetracycline, Cyanamid's Aureomycin Patent Precluded Pfizer From Maintaining It as An Exclusive Product.

7. In June of 1952, Dr. Conover, a Pfizer scientist, discovered tetracycline and the

deschlorination process for producing it. The patent application for both product and process claims was filed in October of 1952.

8. Translating Dr. Conover's invention from a laboratory discovery into a commercial product proved to be a serious problem to Pfizer. The only method known to Pfizer for making tetracycline was by deschlorination of Aureomycin, a chemical process by which the Aureomycin molecule was transformed into a tetracycline molecule. Aureomycin was a patented exclusive of Cyanamid, and Pfizer had no source of supply of this product other than the small quantities which could be purchased on the open market. Thus, Pfizer could not commercially manufacture tetracycline without a patent license or a supply of bulk Aureomycin from Cyanamid.

9. Following the discovery of tetracycline, Pfizer refrained from seeking a patent license or bulk Aureomycin from Cyanamid to manufacture tetracycline, because they felt tetracycline was their discovery and had no intention of sharing it. Pfizer, instead, tried to develop a direct fermentation process for tetracycline, thereby avoiding the necessity of Aureomycin as a starting material. However, for several years this effort was unsuccessful.

10. While trying to develop a direct fermentation process for tetracycline, Pfizer became aware of Cyanamid's interest in tetracycline. In the late summer of 1953, Pfizer began to receive information about Cyanamid's extensive clinical testing of tetracycline from its salesmen. This led Mr. McKeen to believe that Cyanamid was seriously interested in tetracycline and would probably market it in the near future.

11. McKeen's suspicion that Cyanamid would soon begin commercial marketing of tetracycline was confirmed in the latter part of October 1953, when he attended an antibiotic symposium sponsored by the Food and Drug Administration. At this symposium, Cyanamid scientists presented a number of papers describing the successful results of clinical tests with tetracycline. This made it clear to Mr. McKeen that Cyanamid considered tetracycline superior to any other antibiotic then on the market and was preparing to introduce it soon.

12. Shortly after this symposium, on October 29, 1953, Pfizer received a notice to copy claims from the Patent Office in connection with its Conover patent application. This notice indicated that an interference proceeding with respect to the application for tetracycline was imminent. Based on Cyanamid's clinical testing reported by its salesmen and events at the FDA symposium, McKeen had little doubt that Cyanamid was the other party to the

forthcoming interference. Up until this time there had been no communications between Pfizer and Cyanamid concerning the tetracycline patent or products.

13. The specter of an interference proceeding created a dilemma for Pfizer. If the interference was litigated, the issuance of the tetracycline patent would be delayed indefinitely, whereas, since Cyanamid held the patent on Aureomycin, it could produce substantial quantities of tetracycline and enter the market immediately. Pfizer, on the other hand, since it was unable to find a direct fermentation process for the manufacture of tetracycline, had no means of manufacturing tetracycline without a license from Cyanamid under its Aureomycin patent or a supply of bulk Aureomycin.

14. It became apparent that if Pfizer was to get on the market with tetracycline it needed a license from Cyanamid under its Aureomycin patent and manufacturing know-how. Also, in order to cut down Cyanamid's lead-time, which is a very important consideration in the pharmaceutical industry, Pfizer needed an immediate supply of bulk tetracycline.

The Pfizer-Cyanamid Settlement Was The Result of Business Problems Faced By Both Companies and Reflects Their Respective Bargaining Positions.

15. Faced with the prospect of Cyanamid's imminent marketing of tetracycline, and knowing that Pfizer knew of no way to produce tetracycline without Aureomycin, Pfizer's management concluded that an attempt should be made to settle the potential patent block with Cyanamid so Pfizer could start producing and marketing tetracycline without delay. Thus, Pfizer's management authorized Mr. McKeen to arrange a meeting with Cyanamid's president, Wilbur Malcolm, to try and settle the prospective interference.

16. During the first or second week in November of 1953, Mr. McKeen went to see Dr. Malcolm to find out whether Cyanamid was the other party to the prospective interference, and if they were, to determine if a settlement could be reached. McKeen planned to make it clear taht Pfizer was willing to settle the interference when it was declared, but only on the condition that Pfizer received a license under the Aureomycin patent, production knowhow and a supply of bulk tetracycline so Pfizer could enter the market immediately. McKeen established at this first meeting that Cyanamid had also received a notice to copy claims.

17. A second meeting was held a week or ten days later. At this meeting Mr. McKeen was

accompanied by John Powers, a Pfizer vice-president, and Dr. Malcolm was accompanied by George Martin, a Cyanamid vice-president. During this meeting a settlement agreement was negotiated. It was agreed in principle that the interference would be settled in the usual fashion: Proofs of priority would be exchanged and the issue would be finally decided by the Patent Office (without any motions or appeals) unless upon the proofs one of the parties was willing to concede priority; and the losing party would receive a non-exclusive license under the tetracycline patent when it issued. Cyanamid agreed to give Pfizer a non-exclusive license under the Aureomycin patents to make taht product in connection with the manufacture of tetracycline, and the know-how and a culture necessary to make that license effective. Royalty rates were discussed but not agreed upon; the principals left them to be worked out by their lawyers in connection with the drafting of a formal agreement. Licensing agreements, but not the bulk sales, were contingent on, and entered after, the actual declaration of the interference. The price of the bulk tetracycline to be furnished by Cyanamid was discussed and an agreement was reached.

18. As had been expected, the Patent Office declared an interference between Pfizer and Cyanamid on December 28, 1953. On January 11, 1954, the oral agreements were reduced to writing. Thereafter, the two companies promptly exchanged proofs of priority, and it was concluded that Pfizer had priority of invention. Following this

determination, Cyanamid filed a concession of priority with the Patent Office and the first Interference was dissolved in February 1954.

19. Pfizer's decision to seek a settlement of the Interference was based on its own independent economic interest, and was consistent with its own individual bargaining position. Pfizer could not make tetracycline without a patent license from Cyanamid or a supply of bulk Aureomycin. Litigation of the Interference would only cause delay and, in the meantime Cyanamid could commercially exploit Pfizer's invention. Faced with these prospects, Pfizer decided to give up its hope of keeping tetracycline as a specialty product and sought a settlement with Cyanamid.

20. Cyanamid's decision to settle the Interference was an independent decision necessitated by the exigency of a previously adopted business decision. Malcolm was aware of a scientific article previously published by a Pfizer scientist which indicated that Pfizer possibly had a priority of invention on tetracycline. Despite this knowledge, Malcolm decided to discount Aureomycin and totally commit Cyanamid's sales efforts to tetracycline. Thus, McKeen had Malcolm "over a barrel" because if the tetracycline patent issued to Pfizer, McKeen could demand an exorbitant royalty from Cyanamid or prevent them from marketing tetracycline. As a result of its commitment to tetracycline, Cyanamid could not return to Aureomycin if

Pfizer obtained the tetracycline patent and refused to license them. While Cyanamid could prevent Pfizer from making tetracycline with its Aureomycin patent, Pfizer still had Terramycin which was an excellent seller. Faced with these possibilities, Malcolm elected to settle the prospective interference.

21. Cyanamid's decision to sell bulk tetracycline to Pfizer was the result of each company independently determining how such a sale might advance their own business interests. Pfizer needed bulk tetracycline to begin commercial sales immediately and cut down Cyanamid's lead time. Malcolm felt that if he could get Pfizer committed to purchase bulk tetracycline from him it would help Cyanamid's bargaining position.

22. The fact that the bulk sales transaction was not memorialized in the settlement agreement is not unusual. The shipments of tetracycline from Cyanamid to Pfizer were to start months before the agreement was finalized and signed. It was normal business practice for Pfizer to handle such short term agreements regarding bulk sales or purchases by purchase orders.

23. There was no discussion during the negotiations between Pfizer and Cyanamid to settle the prospective tetracycline patent interference that Pfizer would get the tetracycline patent. Pfizer and Cyanamid

did not agree that Pfizer would get the patent on tetracycline.

24. There was no conspiracy, agreement or understanding between Pfizer and Cyanamid to exclude others from the broad spectrum antibiotics market. In none of the negotiations between these defendants was this subject discussed.

25. On January 29, 1954 Mr. McKeen, as well as other Pfizer executives, appeared before the Security Analysts Society of New York. During a question and answer period following prepared remarks by some of Pfizer's officers and directors, Mr. McKeen, in answer to a question from the floor, stated that Pfizer was confident of obtaining the tetracycline patent and that it was not Pfizer's present intention to license Bristol. The question was appropriate in view of the fact Bristol had publicized its intention to produce tetracycline. McKeen's answer was also appropriate in view of Pfizer's previously adopted policy concerning licensing and bulk sales.

26. The public statements made by Mr. McKeen to the Security Analysts Society of New York on January 22, 1954 does not indicate that Pfizer and Cyanamid had reached any agreement to exclude competitors. Such statement was no more than a forthright statement of Pfizer's independent business policies. The article

written by Mr. Paul Rubens, a reporter for the Drug Trade News who attended the Security Analyst Meeting is of no probative value. Rubens had no independent recollection of what was said at the meeting. He had not seen the notes upon which he based the article for 6 years (prior to his testimony) and they were no longer in existence. There was confusion regarding the accuracy of the report and as to whether there was any rewrite by the editor before it was published. The article contained an obvious error relating to the methods by which Pfizer would produce tetracycline. Various supposed direct quotes in the article attributable to McKeen contain ellipses. Rubens admitted these omissions could affect the meaning of the sentence. The reasons given for these omissions show the unreliability of the article.

27. The article written by William Kopsa, published as a Security Analyst's Report for Francis I. du Pont and Company for the purpose of interesting others in the purchase of Pfizer stock, likewise is of no probative value. Kopsa's notes contained inconsistencies with the published article. The article contains an obvious error in indicating that Pfizer was producing tetracycline by direct fermentation. At least some statements set forth in the article were not in Kopsa's notes but rather an interpretation of his notes.

28. Almost immediately after Kopsa published his security analyst report,

McKeen read the statements attributed to him and promptly wrote a letter to Kopsa explaining the terms of the Pfizer - Cyanamid settlement agreement in an effort to clear up the misinterpretation.

Pfizer's Settlement of Infringement Litigation with Bristol, Squibb and Upjohn Was a Normal and Straight-Forward Resolution of Hotly Contested Litigation.

29. In February 1954, Frederic Schwartz, President of Bristol, after reading the article in the Drug Trade News, telephoned Mr. McKeen and asked whether Pfizer would grant a license on tetracycline to Bristol if Pfizer received the patent. McKeen replied that Pfizer would not grant such a license and that the company intended to enforce any patent which it received against Bristol or any other infringer.

30. Schwartz, in spite of being put on notice by McKeen that if Pfizer received the tetracycline patent it would enforce it, concluded it was necessary, for Bristol's financial survival, to begin the marketing of tetracycline under its own label. Bristol entered the market in May of 1954; Squibb and Upjohn went on the market with their tetracycline, purchased in bulk from Bristol, in October and November 1954 respectively.

31. On January 11, 1955 Pfizer was awarded the tetracycline patent and, on that very

day, sued Bristol, Squibb and Upjohn. The infringement actions were filed in the Northern District of Georgia, a district in which calendars were relatively current, in an attempt to obtain a speedy disposition on the merits. However, after nine months of litigation, the infringers succeeded in having the cases transferred to the Southern District of New York, where, it was believed, it could not be reached for trial for a long time.

32. Pfizer acted independently and in its own self-interest in filing the infringement suit against Bristol, Squibb and Upjohn. Pfizer was confident of the validity of its patent and did not hesitate to subject that validity to court scrutiny.

33. Despite their success in having the case transferred to New York, and efforts through discovery procedures to obtain evidence in support of their defense, Bristol, Squibb and Upjohn were not confident about their chances of prevailing in the infringement litigation.

34. In October 1955, because of the progress of the litigation and the potential financial risks involved, Donald F. Gilmore, Upjohn's Chief Executive Officer, arranged a meeting with Mr. McKeen and sought a separate settlement with Pfizer. McKeen and Gilmore, however, could reach no agreement at this meeting.

35. Bristol, however, became fearful that if Upjohn continued to negotiate with Pfizer, a settlement between the two companies might be reached and Bristol would lose Upjohn as a bulk customer. Thus, in November 1955, in order to hold Squibb and Upjohn as bulk customers and assure Bristol's financial future, Bristol agreed to revise the bulk sales agreement between itself and Squibb and Upjohn.

36. Bristol agreed to reverse the indemnity agreement thereby relieving Squibb and Upjohn of millions of dollars in potential infringement damages. In exchange for this, Squibb and Upjohn agreed to turn over the defense of the patent infringement suit to Bristol, to purchase their bulk supplies of tetracycline from Bristol for a period of three years after the litigation ended and not to pursue any separate settlement agreement with Pfizer. Squibb and Upjohn, in hopes of securing an early end to the litigation, also agreed to pay one half of the costs of the settlement if Bristol succeeded in terminating the Pfizer litigation within six months and if the settlement included a license allowing Squibb and Upjohn the right to purchase, use and sell tetracycline to the drug trade.

37. In December 1955, McKeen was forced to reassess his settlement position with Bristol, Squibb and Upjohn. The cause of this reassessment was that a private detective by the name of Broady, who was employed by Pfizer to conduct a security

check for it in another law suit, was convicted of tapping the telephone lines of Bristol and Squibb executives while he was in Pfizer's employ. Although there was no charge that Pfizer had authorized the wire tapping, Schwartz, of Bristol, threatened to use the incident to assert a defense of unclean hands in the infringement litigation. McKeen feared that this would result in additional delay in the specter of harmful publicity.

38. The effects of possible harmful publicity connected with the Broady incident caused McKeen to radically alter his settlement posture. Schwartz, of Bristol, recognized the embarrassing position that McKeen was in because of the Broady incident, and used the incident to his advantage to effectuate a settlement with Pfizer.

39. The settlement discussions took place on December 14 and 15, 1955 between McKeen and Connolly, Pfizer's patent attorney, and Schwartz accompanied by Walker, patent attorney for Bristol, Squibb and Upjohn. The result of these discussions was that a settlement agreement was reached by the parties.

40. The terms of the settlement agreement provided that Bristol would receive a non-exclusive royalty bearing license to make, use and sell tetracycline. Squibb and Upjohn, pursuant to their earlier agreement

with Bristol, received a nonexclusive, royalty bearing license to purchase, use and sell tetracycline to the drug trade. Finally, all three companies agreed to pay back royalties to Pfizer of over 600,000 dollars for their infringing sales. Under the terms of the license Bristol was free to sell bulk tetracycline to anyone it chose. Bristol was not limited to Squibb and Upjohn as bulk customers. There was nothing in the license, nor were there any discussions during the negotiations attempting to limit Pfizer's freedom to grant similar licenses to any other party as it saw fit.

41. The fact that no executive from Squibb or Upjohn attended the settlement negotiations is of no import. Schwartz was accompanied by Charles Walker, patent counsel of record for Bristol, Squibb and Upjohn in the litigation being settled. Also, McKeen was assured by Schwartz that he was authorized to represent Squibb and Upjohn. However, prior to the signing of the settlement agreement, McKeen did confer with Squibb and Upjohn to make sure that the terms of the agreement were suitable for them.

42. Pfizer granted Squibb and Upjohn a license to purchase, use and sell tetracycline, which was exactly what they had requested Schwartz to obtain for them. Squibb and Upjohn did not receive a license to make tetracycline because they did not request one and it certainly was not

Pfizer's duty to try and persuade them to take more, or less, than they asked for.

43. The license agreement between Pfizer and Squibb and Upjohn contain the same royalty rate as the license to Bristol (3 1/2%) even through Squibb and Upjohn, unlike Bristol, were not given a license to manufacture tetracycline, However, under its license from Pfizer, Bristol was obligated to pay the full royalties on sales made by Squibb and Upjohn on material purchased from Bristol. Thus, Squibb and Upjohn had no royalty obligation to Pfizer at all so long as Bristol paid royalties on account of sales made by them. The division of royalties as between Bristol on the one hand and Squibb and Upjohn on the other hand was a matter of agreement between them, with which Pfizer had nothing to do.

44. The settlement by Pfizer and the litigation with Bristol, Squibb and Upjohn, and the settlement terms agreed to were motivated by its independent business judgment and the settlements were no more than a normal compromise of a hotly contested litigation.

45. The settlement agreements between the parties, and the various licenses to Bristol, Squibb and Upjohn contain all the agreements. There were no other agreements of any kind or character. There was no consideration, conspiracy, or agreement in restraint of trade entered into between Pfizer, Bristol, Squibb and Upjohn.

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B. THERE WAS NO PRICE-FIXING CONSPIRACY BETWEEN PFIZER AND ANY OTHER DEFENDANT

1. Prior to July 28, 1958, there were four broad spectrum antibiotics: tetracycline, marketed by all five defendants under various brand names; Terramycin, marketed only by Pfizer; Aureomycin, marketed only by Cyanamid; and Chloromycetin, marketed only by Parke, Davis. These products could generally be substituted for one another.

2. Broad spectrum antibiotics are a distinct and unique group of anti-infective agents because of their efficacy against both gram-positive and gram-negative bacteria. They have approximately the same range of antibacterial activity. They are effective not only against nearly all of the same germs which can be controlled with the narrow and medium spectrum antibiotics, but also against many germs which other drugs do not control. For this reason, the broad spectrums are uniquely useful in treating infections which are unresponsive to other therapy or not immediately diagnosable, and in preventing infection in patients whose resistance has been lowered by illness or surgery. In some cases, therefore, there is no medically adequate substitute for broad spectrum therapy.

3. The broad spectrum antibiotics sold for human use in the United States are ethical drugs which may not legally be sold or dispensed without a physician's prescription.

4. The total usage of broad spectrum depends almost entirely upon the size of the population, the state of medical opinion as to the diseases and conditions for which braod spectrum therapy is appropriate, and the incidence of such diseases or conditions.

5. Whether broad spectrum therapy is appropriate in a particular case is a medical question. Almost invariably this question will be resolved solely upon the comparative therapeutic effectiveness of various types of therapy. When life and health are at stake, price is at most only a minor consideration to the physician in deciding whether or not to use broad spectrum therapy.

6. The cost of broad spectrum antibiotics has seldom prevented physicians from prescribing them or patients from receiving them in appropriate cases. In economic terms, the demand for these products has been "inelastic"; in other words, a further decrease in prices would not have increased the number of units sold enough to offset the loss of revenue resulting from the reduction of the unit price.

7. The defendants sold their antibiotic products to two broad classes of customers: the prescription market and the hospital market. The characteristics of these two markets were substantially different. The prescription market was not price

sensitive; a price reduction on a brand product would not increase sales of that brand. On the other hand, brand sales in the hospital market could be increased by means of price reductions but only by cutting into sales of other brands, total usage would not be increased by price reductions to the hospital market.

Pfizer's Prices in the Prescription Market Were the Result of Independent Action

8. The prescription market is composed of retailers and wholesalers who purchase drugs for ultimate resale to consumer patients upon the written prescription of a physician. The function of retailers and wholesalers is to provide the distribution services necessary to insure availability of ethical drugs as and where prescriptions are presented.

9. The retailer and wholesaler had virtually no control over which company's product would be used by the patient since the vase majority of prescriptions are written by brand name rather than generic name. In filling a prescription specifying a particular brand in North Carolina, a pharmacist cannot legally substitute a different brand without the consent of the prescribing physician. To some extent, retailers may occasionally influence brand selection, by substitution of brand with the physician's consent, or by personal friendship with physicians. However, the

retailer's influence upon brand specification is the exception rather than the rule.

10. Price is a competitive factor to the extent that it may affect the doctor's choice of a particular brand of broad spectrum drug. Although the doctor's decision whether or not to employ broad spectrum therapy will rarely be affected by considerations as to the cost to the patient, since there are available within the broad spectrum range different drugs of comparable therapeutic values or different brands of the same drug, differences in price become important to the prescribing physician. Physicians learn of comparative costs from many sources, including their patients and detail men, and tend to prescribe the least expensive acceptable brand or product. For this reason no producer of broad spectrum antibiotics would wish to be undersold by a competitor. The degree of uniformity of list prices which prevailed in the prescription market was a normal and economically sound consequence of the facts as to the nature of the market itself.

11. Pfizer's first experience with the pricing of broad spectrum antibiotics came with the introduction of Terramycin in March, 1950. Cyanamid's Aureomycin and Parke, Davis' Chloromycetin were already on the market, and Pfizer management knew that these drugs were selling at identical prices. They also knew that there had been earlier price reductions on Aureomycin and Chloromycetin and that each price reduction

on one product had promptly been met by a price reduction on the other.

12. Pfizer initially priced its competitive Terramycin package size at $8.40 to the retail drug trade, 5% more than the price of Aureomycin and Chloromycetin. Mr. McKeen hoped that the higher price might help Pfizer to develop an "atmostphere of superiority" for its new discovery. A similar differential was used for prices on other forms of the product and to other customer classes. However, Pfizer quickly learned that higher list prices hindered rather than helped it to compete against Parke, Davis and Cyanamid in the prescription market because competitors' detail men were pointing out the price differential to physicians. Therefore, when Cyanamid and Parke, Davis again reduced their list prices by 25% in May of 1950, Pfizer promptly met their new prices exactly. Pfizer did not attempt to maintain the differential because it had been handicapped in selling Terramycin at list prices higher than those charged by competitors for different but therapeutically similar products.

13. In September of 1951, after successfully marketing Terramycin for about a year and a half, Pfizer announced general list price reductions on all of its Terramycin dosage forms. The list price to the retail drug trade of a bottle of sixteen 250 mg. capsules was reduced 15% from $6.00 to $5.10. Cyanamid and Parke, Davis matched the new prices almost

immediately, before the price differential could make any difference in Pfizer's market share. Pfizer found that its price reduction had not improved its competitive position. Pfizer learned by actual experience that general list price reductions in such a market are self-defeating.

14. By long-established custom in the pharmaceutical industry, shelf stock adjustments are given to wholesalers and retailers if list prices are reduced. One of the Terramycin list price reductions cost Pfizer $300,000 in shelf stock adjustments. This practice made Pfizer reluctant to reduce its list prices.

15. The prices in existence in the prescription market in September, 1951 generally remained at this level until August, 1960. Pfizer had learned, and apparently so had Parke, Davis and Cyanamid, that a competitive advantage could not be gained either by price increases or price decreases.

16. Pfizer's pricing policies and practices over the next nine years were merely the continuation of those policies and practices which had proved effective during Pfizer's early experience with broad spectrum antibiotics.

17. In November of 1953, Cyanamid introduced its brand of tetracycline at the same list prices then in effect for Aureomycin. Two months later Pfizer introduced Tetracyn at its current Terramycin list prices, which were the same as Cyanamid's on Aureomycin and Achromycin to all customers except wholesalers. A few months later Pfizer reduced its discount to the wholesaler on Tetracyn (but not on Terramycin) from 20% to 15-2/3% and 5% off prices to the retailer, so that its Tetracyn list prices to wholesalers would match the Achromycin list prices.

18. Pfizer introduced its tetracycline at the prevailing price because of its past experience in the pricing of broad spectrum antibiotics.

19. It was not unusual in the pharmaceutical industry to find identical products, or products having the same therapeutic pruposes, selling at identical prices.

20. The degree of stability of list prices which prevailed in the prescription market was a normal and economically predictable consequence of the facts as to the nature of the market itself. Any price reduction by Pfizer, or any of the defendants, in the prescription market would not have increased its unit sales, or its market share; it would have reduced its profits.

21. During the period from October 1951 through August 1960, Parke, Davis' prices in the prescription market were identical to those of the other companies and the prices remained stable. The pricing policies of Parke, Davis were adopted independently by that company.

22. In July of 1960, Pfizer adjusted its discount to retailers in order to increase its direct sales to retailers at the expense of sales through wholesalers. Pfizer increased the discount to retailers (but not to wholesalers) so as to reduce the price to retailers by about 15%. Pfizer's objective was twofold: (a) to obtain the added revenues that would result from increasing the proportion of its direct sales to retailers and (b) to meet the desires of its salesmen who desired commissions on sales generated in their territory. Pfizer's management did not expect to gain any competitive advantage against other manufacturers of broad spectrum antibiotics by this discount adjustment because of the likelihood that the other companies would meet it at once. Pfizer's effort was very successful; there was a dramatic shift of Pfizer's business from sales to wholesalers to sales to retailers.

There Was No Conspiracy Between Pfizer and Any Other Defendant With Respect to Hospital Classification

23. When Pfizer entered the industry with its own labeled products in 1950, it found that other sellers of pharmaceuticals

classified hospitals as either "federal", "CCS" (County-City-State) or "NPA" ("non-profit association", including all private hospitals), depending upon whether the institution was supported by federal, local government or private funds. CCS hospitals expected and ordinarily were granted lower list prices than NPA hospitals, and Pfizer found that this difference applied "across the board" to all pharmaceuticals.

24. The practice of classifying hospitals on the basis of ownership is a long-established custom of the pharmaceutical industry, antedating by many years the advent of broad spectrum antibiotics. This classification policy applied to the entire product line of defendants' products.

25. The list price for each classification was the maximum - that is, the price offered by a defendant to any customer on a routine small order. Both CCS and NPA customers regularly obtained prices well below list on large orders. Therefore, at least on large orders, the hospital classification policy was not effective in maintaining a price differential between these customer markets.

26. In relying upon published hospital directories to facilitate initial classification of all hospitals, each company independently chose the obvious, most practical method. There are more than 12,000 hospitals in the United States. It

would have been financially impractical and physically impossible to investigate and classify each on its merits. Besides reducing the administrative burden, reliance upon directories had the advantage of minimizing antagonism on the part of hospitals dissatisfied with their classifications.

27. Cyanamid reviewed its classification policy in May 1954 and Pfizer in July 1954. Each company independently adopted a different set of criteria: Pfizer permitted CCS classification if any one of three directories so listed the hospital; Cyanamid relied on only one directory. Furthermore, Pfizer's inflexible reliance on directories was reconsidered within one month, while Cyanamid persevered until October 1955.

28. Bristol, unlike either Pfizer or Cyanamid, relied upon two directories, the Modern Hospital Director and the American Medical Association Directory, as guides to determine ownership of hospitals.

29. Squibb has classified hospitals CCS or NPA according to ownership since before 1922, and did not change its policies on the introduction of tetracycline. Squibb has used the Modern Hospital Directory and the American Hospital Association Directory as basic aids in determining ownership, and has also reclassified to meet competition "in a few rare cases". Squibb recognized

that careful classification was important to customer relations and that unnecessarily low prices to some NPA hospitals might invite competitors' reprisals.

30. Upjohn's classification system differed markedly from that of all other respondents. To the extent that hospital directories were utilized, Upjohn relied exclusively upon the Journal of the American Hospital Association. In addition to classifying CCS and NPA hospitals by ownership status, Upjohn separately classified and gave "special prices" to "teaching institutions" approved by the AMA for residents and intern service. This policy continued until 1957.

Pfizer's Prices to NPA Hospitals Were the Result of Independent Action

31. The NPA customer sub-market includes hospitals, clinics and other institutional purchasers which are not owned or supported by a local, state or federal government. This classification also includes private hospitals operated for a profit.

32. Most NPA hospitals purchase their requirements periodically by informal negotiation with the various sellers. Some of the larger NPA institutions purchase by means of competitive bidding. In addition, purchases of small quantities are made by NPA hospitals at catalogue prices.

33. An increasing number of NPA hospitals employ a "formulary system" under which drugs are classified generically and the pharmacist is authorized to dispense any one of several brands of a generic drug irrespective of which brand has been prescribed by the hospital physician.

34. There has been active price cutting in sales of broad spectrum antibiotics to NPA hospitals. The principal method of price cutting has been the inclusion of "free goods" as a part of a sale. "Free goods" are material which is bargained for and sold as part of an order but which is not billed to the customer. The material furnished as free goods is often the same dosage form and package size as that of the basic order, but may be other dosage forms, sample packages, or other products. The invoiced portion of the order is billed at the current list price; the free goods do not appear on the invoice recording the sale but are delivered at no charge for inclusion in the hospital stock. Free goods are a means of effecting a unit price reduction.

35. When Pfizer entered the pharmaceutical industry in 1950, it was aware that the use of free goods was a common trade practice and it adopted and followed this practice in its sales to NPA hospitals.

36. Pfizer found free goods useful as a means of offering price reductions

adaptable to each individual competitive situation. Free goods were difficult for competition to match because they were usually not a matter of invoice record.

37. Free goods were given to NPA hospitals regularly and in substantial amounts, but the amount needed to secure broad spectrum business varied from place to place and from time to time.

38. The authority to effectuate price reductions to NPA hospitals by means of free goods was delegated to Pfizer's Regional Managers to be exercised by them in accordance with their judgment as to local market conditions and needs.

39. Cyanamid authorized its Regional Managers to give up to 20% of the broad spectrums purchased in free goods to meet competition. On some occasions Cyanamid authorized larger amounts of free material, but usually it would not meet competition at lower prices. In contrast, Pfizer never imposed a percentage limit and urged its salesmen to meet whatever competition they encountered.

40. In marketing its plain tetracycline (Polycycline), Bristol imposed no percentage limit and authorized its Regional Managers to use as much free goods as necessary to secure NPA business. When

its tetracycline phosphate complex was introduced in late 1956, Bristol directed that no price reductions by means of free goods or otherwise be offered on that product. While Pfizer would give free goods as a quantity in addition to the amount ordered, Bristol would often ship the amount ordered and reduce its invoice quantity by the agreed free goods.

Pfizer's Prices to CCS Hospitals Were the Result of Independent Action

41. When it introduced Steclin, Squibb did not permit broad spectrum price reductions by free goods or other means and soon learned that it was undersold in the NPA market. Subsequently, Squibb responded to competitive pressure and authorized its Regional Managers to give up to 20% in free goods in order to meet competition on Steclin products. However, Squibb did not permit free goods on sales of its tetracycline phosphate complex (Sumycin) until late 1957. Similarly, Squibb did not allow price reductions by free goods or other means on Mysteclin until early 1958. In computing free goods, Squibb ordinarily would consider free goods to be a portion of the basic order which was shipped but not billed, whereas Pfizer would deliver free goods as an amount in addition to the order.

42. Mercy Hospital, in Charlotte, North Carolina, received from 10% to 30% in free goods from all defendants; and defendants' quotations differed from each other on each

bid and the amount of free goods offered varied.

43. Another competitive measure employed in the sale of broad spectrums to NPA hospitals was the use of handling allowances. Such an allowance was in effect a discount to a retailer enabling him to make a sale to an NPA hospital at a price lower than the manufacturers' NPA price.

44. CCS institutions number in the thousands, vary considerably in size and are widely dispersend throughout the United States. These institutions comprise a sub-market of the broad hospital classification.

45. The quantities involved in procurements by CCS customers vary considerably; on the average they are somewhat larger than purchases by NPA institutions, wholesalers or retailers, and in some cases are very large.

46. As tax-supported entities, most CCS institutions are required to purchase their estimated requirements upon formal sealed bids. Usually CCS institutions request quotations on fixed quantities of material for shipment to a particular destination.

47. CCS institutions also purchase broad spectrum antibiotics on an open market basis from manufacturers, drug wholesalers and retailers, although quantities involved on such purchases are usually relatively small.

48. When Pfizer entered the broad spectrum field it followed the prevailing industry practice of establishing lower list prices to CCS institutions.

49. Following the introduction of defendants' competitive brands of tetracycline, direct bid prices on tetracycline at levels considerably below the published price began to appear frequently in various parts of the country during the fall of 1954. CCS bids in tetracycline by defendants and dealers at $22.95 less 2%, $22.49 net, and $22.49 less 2% became increasingly common until, on May 3, 1955, Cyanamid announced a reduction of its published CCS price to a level of $22.49 less 2% in recognition of the fact that the earlier price of $25.50 had, for some time, not been low enough to obtain substantial CCS business.

50. Squibb, on May 4, 1955, and Bristol on May 5, 1955 announced changes in their CCS list prices to a level of $22.49 less 2% cash discount. Pfizer reduced its price to $22.49 net on May 24, 1955, three weeks after the reduction by Cyanamid. Upjohn, although it had quoted the $22.49 price as

early as February 1955, and thereafter authorized prices down to $22.49 on CCS bids and orders involving 10 or more bottles, did not finally reduce its CCS list price until August 1, 1955.

51. A competitive method frequently used independently by Pfizer and other defendants to facilitate the quotation of prices to CCS hospitals at levels below the CCS list was the use of handling allowances and so-called dealer bidding. Under this practice, long standing in the pharmaceutical industry, dealers are allowed a handling allowance or discount off CCS list prices when bidding or supplying broad spectrum antibiotics to CCS institutions, the amount of the allowance or discount being sufficient to enable the dealer to bid below the manufacturer's CCS price and still have a satisfactory margin. Most of the defendants regularly made available a handling allowance of at least 10%.

52. By virtue of such handling allowances dealers frequently submitted bids to CCS institutions at prices lower than the manufacturer's CCS price. Even though the manufacturer knew that such lower bid was to be submitted by a dealers, the manufacturer would normally submit a bid of its own, usually at its CCS price, in order to remain on the invitation list.

53. By statute, regulation or custom in many areas, a local bidder receives a preference in the form of a levy of a stated percentage penalty against non-local bidders. CCS institutions are thereby required or permitted to make awards to a local bidder whose bid price is not more than that of a non-local bidder.

54. Submission of bids through local dealers also tends to minimize the self-defeating consequences of price reductions by obscuring the origin and extent of price reductions on CCS bids, because competitors are able to obtain only imperfect knowledge concerning a particular defendant's bidding policy.

55. The most common type of arrangement between Pfizer and dealers was a continuing offer by Pfizer to make its entire product line available to them on CCS transactions at prices 10% below its regular CCS prices. In the event a dealer was successful on a CCS bid or order, Pfizer at the dealer's request, would drop-ship the material to the CCS institution and invoice the dealer at CCS prices less a 10% handling allowance. Pfizer left it to the dealer to determine how much of the handling allowance was to be passed on to the institution.

56. Pfizer also made special arrangements with dealers to permit them to bid upon its products at even lower prices.

57. Local dealers were frequently in a much better position to evaluate the local competitive situation than a manufacturer or supplier. Such knowledge is especially valuable to a manufacturer when it first enters the ethical drug industry with its own label and has not yet acquired the marketing organization or experience necessary to survive in this highly competitive industry.

58. Bids by dealers are not technically those of the manufacturer but are made possible by the action of the manufacturer. Such bids are regarded as a means of price competition to promote the sale of the particular brand product. The use of such handling allowances and dealer bidding are utilized by Pfizer to gain a competitive advantage in the sale of its broad spectrum antibiotics to CCS hospitals and are a means of price competition.

Pfizer's Prices to Federal Agencies and Institutions Were the Result of Independent Action

59. It is a practice of long standing in the pharmaceutical industry to classify agencies and activities of the United States Government separately. This customer submarket includes the Military Medical Supply Agency (formerly known as the Armed Services Medical Procurement Agency), Veterans Administration, General Services Administration, and all federal institutions buying individually regardless of volume.

60. Although these accounts were classified as a single group by Pfizer for reporting sales, their procurement policies and the volume of their purchases varied greatly. Some offered the opportunity to obtain large contracts for fixed quantities on the basis of price alone, while others were no more attractive potential sources of revenue than small NPA hospitals without formulary systems. However, all federal customers were offered prices at least as low as, and often lower than, those quoted or bid directly to any other customers.

61. There was a measurable and significant deterioration in defendants' prices to the federal market over time. And there were substantial variations in the prices bid by defendants on individual bid submissions.

Non-Price Competition Among the Suppliers of Broad Spectrum Antibiotics Affected their Respective Market Shares

62. Pfizer and its competitors vigorously and often successfully attempted to increase their respective shares of the market by developing and promoting new or improved products, dosage forms and package sizes, and to minimize competitors' advantages by matching their successful product improvements whenever possible.

63. Pfizer sought to develop improvements of its own which would differentiate its tetracycline products from those of others. Pfizer obtained a substantial competitive

advantage with its exclusive products. Pfizer was the first to introduce broad spectrum products fortified with vitamins (SP products), whcih temporarily increased its sales.

64. New product development and promotion had a dramatic effect upon the defendants' sales and market shares. Pfizer's phenomenal success between 1950 and 1953 was the result of medical preference for Terramycin, until Lederle recaptured the largest market share by introducing the first brand of tetracycline. Later, Lederle's lead was partially offset by the introduction of combinations such as Squibb's Mysteclin, Bristol's Tetrex and Pfizer's Sigmamycin, which contributed substantially to the tetracycline sales of the defendants marketing them. Other innovations in products, dosage forms, potencies and package sizes had a smaller but significant impact upon defendants' market shares.

65. In 1959, Pfizer introduced pre-constituted Terramycin intramuscular solution. Scientific research revealed that only Pfizer's specialty drug, Terramycin, was capable of being marketed in this particular dosage form. Since Pfizer realized that it could not be met by its competitors on this pre-constituted solution, Pfizer reduced the prices of this exclusive product so as to increase its use.

66. Parke, Davis became the second largest seller of broad spectrum antibiotics over the period 1954-1960 although its prices remained identical to those of the defendants.

67. Although there existed differences in defendants' respective costs of marketing tetracycline, no defendant reduced its price in an attempt to exploit this cost differential because of the prospect of reduced revenues. Such reductions would not have effected changes in market share or in demand for tetracycline.

68. Pfizer did not disclose to anyone outside the company any of its cost data. Nor did Pfizer have knowledge of the manufacturing costs of its competitors. Pfizer did not have any relative cost information from which to determine whether it might have a competitive advantage.

69. Quantity discounts were not offered because any quantity discounty would be met by competitors and the resulting reduction in revenue would be self-defeating.

Pfizer's Limited Resale Price Maintenance Activities Were Lawful and Were the Result of Independent Action

70. Before August 30, 1956, Pfizer maintained fair trade agreements with wholesalers in states having effective fair

trade statutes. These agreements were terminated on August 30, 1956, upon advice of counsel that they no longer were enforceable because of a United States Supreme Court decision.

71. Except where fair trade agreements were used in states favoring them before this date, Pfizer did not attempt to control the prices of wholesalers. Although their usual margin is about 20%, Pfizer's wholesale customers often reduce their profit margins to compete with Pfizer for retail business. Rather than control such wholesale resale prices, Pfizer regularly used free goods to compete with its wholesalers in sales to direct retailers.

72. Pfizer has never fair traded Terramycin human dosage forms at the retail level. Its Roerig Division briefly fair traded Tetracyn at retail from May through September 1954. The minimum prices used were Pfizer's published suggested list prices. After Tetracyn was transferred to the Pfizer Laboratories Division on October 1, 1954, the product was never again fair traded at the retail level.

73. Retailers and wholesalers who sold Pfizer's products to CCS and NPA hospitals on a handling allowance basis were free to make their own pricing decisions.

Product Standardization Was the Natural Result of Competition in the Broad Spectrum Field

74. Standardization of dosage forms and package sizes of broad spectrum antibiotics was a natural development in the pharmaceutical industry as a matter of convenience to the medical and pharmaceutical profession and as a result of medical experience in the effective treatment of disease.

75. In making the marketing decisions, Pfizer conducted investigations which indicated this market preference for the standard dosage forms and package sizes which were, in fact, used throughout the industry. Pfizer's marketing decisions were adopted independently to meet the needs of prescribing physicians and to satisfy the requirements of purchasing institutions.

76. A considerable degree of product standardization in the broad spectrum industry was the natural result of the efforts of each defendant to match the successful product improvements of competitors as quickly as possible. As a result of the independent efforts of the various defendants to differentiate their products, there was never complete product standardization. In fact, many products, dosage forms and package sizes have been marketed by less than all defendants and in some cases by one defendant only.

Pfizer Did Not Discuss or Agree on Prices or Marketing Policies With Any Other Defendant

77. Pfizer and Cyanamid did not discuss the resale prices of tetracycline, Terramycin or Aureomycin at any of the meetings concerning the settlement of the first interference or at any subsequent time.

78. Pfizer did not discuss the resale prices of tetracycline with Bristol, Squibb or Upjohn.

79. There was no agreement or understanding between Pfizer and Cyanamid regarding sampling activities. Pfizer's marketing tactics were the result of its own business judgement.

PART II

Conover's Invention of Tetracycline Was Unobvious.

1. Conover conceived the idea that a new compound corresponding to Aureomycin, but having its chlorine substituent replaced by hydrogen, would be a highly potent antibiotic. Although his concept was viewed with general skepticism by his associates, Conover proceeded to demonstrate its soundness by producing the new compound, which was tetracycline.

2. When Conover made his invention, the chemical structures of Terramycin and Aureomycin had been determined by the Pfizer structure team, but this information had not yet been published and it was not known outside the Pfizer organization. The public was unaware of the structure of these products since the information then available to it was incomplete and misleading.

3. It was most unobvious at the time of Conover's invention that a hypothetical compound wherein the chlorine substituent of Aureomycin was replaced by hydrogen would possess a high degree of antibiotic activity, because similar slight changes in the chemical structures of Terramycin and other known antibiotics had almost invariably greatly reduced or completely destroyed their activity.

4. It was also highly unobvious that Aureomycin could be selectively deschlorinated by mild catalytic hydrogenation because Aureomycin was known to have a large complex molecule containing numerous reducible groups which might be attacked by the hydrogenation reaction, with the production of many undesired reaction products. Disappointments of this nature were frequently encountered in the antibiotic field. Furthermore, the presence of a base (alkaline material) was considered essential in reactions of this type, and it was well known that Aureomycin is destroyed by bases.

5. Although Aureomycin had been known and available for a number of years, and throughout the pharmaceutical industry extensive efforts were being made to discover new and better antibiotics, nobody prior to Conover had discovered that a new and superior antibiotic could be created by deschlorination of Aureomycin. Conover was the first to recognize and identify tetracycline as a valuable antibiotic, and the first to devise a method for producing it in useful form.

6. After Conover discovered tetracycline and published its structure, Cyanamid, Heyden and Bristol also "discovered: this compound and they all considered it to be a patentable invention as shown by the fact that each of them filed a patent application claiming the compound.

7. For a decade, tetracycline was widely recognized as the best of the broad spectrum antibiotics. It had a number of important advantages over the Aureomycin from which it was derived, such as greater stability, production of higher and longer lasting blood levels, and a lower incidence of toxic side effects which have been responsible for the deaths of some patients treated with Aureomycin.

8. Because of its exceptional therapeutic properties, tetracycline largely replaced Aureomycin, and outsold all other broad spectrum antibiotics. Cyanamid sold about

fifteen times as much tetracycline as Aureomycin for therapeutic use.

9. Upon completion of his invention, Conover filed his first patent application on October 23, 1952, fully describing his invention. This application claimed deschloroaureomycin, its salts and the production thereof by mild catalytic hydrogenation of Aureomycin. Since the name "tetracycline" had not yet been adopted for his product, the application referred to it as "deschloroaureomycin".

10. The claims of the first Conover application were rejected on various grounds, including lack of invention of the new products over prior art Aureomycin and Terramycin. In almost all cases, an Examiner's first action in a newlyfiled application is to reject the application on the basis of the best of most pertinent art, setting forth his reasons for the rejection, which permits the applicant to present on the record his reasons for considering his claims patentable over the references cited by the Examiner. Conover replaced his first application by a continuation application filed October 9, 1953, which contained substantially the same disclosure as his first application but used the newly adopted designation "tetracycline" in place of "deschloroaureomycin". Shortly thereafter, on October 20, 1953, Conover filed a Preliminary Amendment and affidavits which demonstrated that the subject matter of his invention was not obvious, and the

rejection of Conover's claims was thereafter withdrawn by the Patent Examiner in view of the substantial advance of Conover's discovery over the prior art.

Conover's Knowledge Concerning the Structures of Aureomycin and Terramycin Was Not Misrepresented.

11. The "Remarks" made by patent counsel in the Preliminary Amendment filed October 20, 1953, that "the structures of oxytetracycline and chlortetracycline were not known at the time of applicant's invention," referred to the state of the prior art (i.e., prior public knowledge). Both Pfizer's patent agent Dr. Murphy, and counsel Mr. Hutz, testified that the statement did not refer to the inventor's personal knowledge, but rather to the state of the prior art. This was the only reasonable meaning to attribute to the statement, since the prior art constitutes the sole relevant basis for determining patentability. The patentability of an invention does not depend on the subjective knowledge of the applicant at the time he made his invention, but rather is tested by objective standards. Lidoff himself testified that the word "known" is often used in Patent Office proceedings to denote "known in the art" or "publicly known". With respect to the statement in issue, Lidoff specifically testified that he understood the word "known" in the context of that paragraphy to be "known in the prior art".

12. Furthermore, the Preliminary Amendment made it clear that Conover was aware of the structures of chlortetracycline and oxytetracycline at the time he performed his original experiment. The amendment specifically referred to the Stephens et al. publication of Pfizer's structure group which contained the first public disclosure of the chlortetracycline and tetracycline structures, of which Conover was one of the authors. In addition, the accompanying affidavit by Dr. Conover included a photocopy of the record of his original experiment which actually contained drawings of the structure of chlortetracycline, and thus showed on its face that Conover was aware of that structure at the time he performed this experiment. Furthermore, the prior art is confirmed by other statements in the preliminary amendment immediately following the quoted statement, which repeatedly referred to "the state of the prior art," "erroneous knowledge of the art," and to what "the art could assume".

The Settlement of the First Interference, and the Award of Priority to Conover, Was Proper.

13. Conover's continuation application became involved in an interference declared December 28, 1953 with the Boothe and Morton application of Cyanamid. The two counts (issues) of this interference were tetracycline, and a process for producing it by mild catalytic hydrogenation of Aureomycin.

14. Pursuant to a settlement agreement, dated January 11, 1954, representatives of Pfizer and Cyanamid met repeatedly to exchange complete evidence bearing on their respective inventions and debate the question of which one was entitled to an award of priority in the interference. After careful consideration, Cyanamid's representatives finally acknowledged that certain early degradation work done by Morton and his co-workers was ineffective since it represented an incomplete, abandoned experiment. The purpose of this work was not to produce a new antibiotic, but merely to obtain more information about Aureomycin; and their degradation products were neither isolated nor identified. Boothe and Morton then conceded priority to Conover. This determination of priority was fully supported by the records, which showed that Conover was the first to produce tetracycline, identify it and establish its therapeutic effectiveness.

15. It is common for the parties to an interference to determine among themselves who is the first inventor from the proofs the parties can present, and to concede priority to the party who is the first inventor. An interference not resolved privately is a very long and costly procedure, involving motions, taking of testimony, hearings and often appeals. Ninety-five percent of all interferences are settled by the parties.

The Second Interference Was Vigorously Contested.

16. Shortly after the first interference was concluded in favor of Conover, his continuation application became involved in a second interference, declared March 2, 1954, with applications of Heinemann et al. owned by Bristol and of Minieri et al. owned by Cyanamid. The issue of the second interference was tetracycline hydrochloride, which the Examiner then considered to be patentably distinct from tetracycline, although he had previously held to the contrary. Numerous motions were filed, briefed extensively and strenuously argued by the parties. The second interference was vigorously and bitterly fought throughout. Eleven contested motions were made, and Pfizer and Cyanamid took positions in direct opposition to each other on eight of them. Pfizer contended that Cyanamid had no standing at all in the proceeding because of an estoppel arising from the settlement of the first interference. This contention prevailed

and Cyanamid was thrown out of the proceeding on Pfizer's motion.

Lidoff and the Patent Office Knew or Should Have Known of the Fact of Co-Production.

17. In late 1953 or early 1954, it became known that insignificant amounts of tetracycline were frequently coproduced with Aureomycin in most S. aureofaciens fermentations. This coproduction phenomenon had been disclosed in various technical publications, at the Antibiotics Symposium held in Washington in Octover 1953, and in a number of patent applications filed during 1953 and early 1954.

18. Lidoff knew or should have known about the phenomena of coproduction. Knowledge of that fact is spread throughout the decision on motions in the second interference. For example:

> "Duggar is not restricted to strain NRRL 2209. Strains of the species are not distinguished by the tetracycline producing function alone but are apparently able to produce tetracycline and chlortetracycline concomitantly, the proportions depending upon variables other than mere strain specificity."

> "The same strain may concomitantly produce both Aureomycin (chlortetracycline) and tetracycline depending

> upon cultural conditions. Minieri et al show some concomitant production if any substantial amount of chloride ion is present. Minieri et al state that tetracycline is produced in high concentration when the available chloride ion in the fermentation medium is minimized and for direct recovery of tetracycline free of chlortetracycline he requires an available chloride content at the level of the order of one part per million."

19. On October 29, 1953, in the Minieri application, Lidoff rejected fermentation process claims, finding:

> "The production of tetracycline as well as varying amounts of Aureomycin (chlortetracycline) would appear to be inherent in the process of Duggar, whose claims are not restricted solely to the production of Aureomycin (chlortetracycline)."

Yet he did not reject Minieri's claims to the product tetracycline on the ground of inherent coproduction.

20. On December 8, 1953, Lidoff issued an office action in the Heinemann patent application, rejecting fermentation process claims on the ground of inherent coproduction under the processes of Duggar and Niedercorn, finding:

> Each of these patentees shows a process of producing a mixture of

antibiotics having the same baric formula as that proposed by applicant, which comprises growing a streptomycete and mutants thereof under controlled conditions. . . . It is recognized that different mutants produce different proportions of the tetracyclic antibiotic, depending in part upon strain and upon media."

He also rejected the product claims to tetracycline, holding:

"Product claims 1 to 7, 18 to 20 are similarly rejected as being unpatentable over each of Duggar and Niedercorn since it appears, from the processes thereof, that applicant's product must be produced inherently."

However, shortly thereafter Lidoff withdrew this rejection of the product claims, apparently on the basis of argument by counsel for Heinemann that the rejection was improper because the cited prior art did not disclose coproduction.

21. Pfizer's Bogert-Walsh application, which was filed in April of 1954, and which was pending before Lidoff in November 1954, disclosed that there was coproduction of chlortetracycline and tetracycline in most efforts to ferment tetracycline directly. The Hooper affidavit, filed in January 1954, in the Heinemann application (which was before Lidoff and in the second interference), informed Lidoff in detail that coproduction occurred in S. aureofaciens fermentations.

22. In addition, the Patent Office had a great deal of information which clearly established the fact of coproduction. On December 4, 1953, Bristol had filed a Lein et al application, which referred to the simultaneous production of chlortetracycline can be produced by S. aureofaciens species NRRL 2209, that in one test using the Duggar medium 5% tetracycline and 95% chlortetracycline were produced and that when using NRRL 2209, more tetracycline and less chlortetracycline is obtained when certain additions to the media are used and "when the media is altered to suit the strain and to facilitate maximum antibiotic production," referring to the Duggar patent.

23. On March 3, 1954, Bristol had filed a Gourevitch et al application which stated that the fermentation procedures and media of the Duggar patent were also useful in the production of tetracycline and that NRRL 2209 produced tetracycline.

24. On August 4, 1954, Bristol had filed a Chertow application which disclosed the production of about 28% tetracycline (and 72% chlortetracycline) using Example 1 of the Niedercorn patent (pp. 5-6) and referred to the description of tetracycline in certain published articles. One of the articles referred to in the Chertow application appeared in the 1953-1954 Antibiotics Annual. The article refers to "Streptomyces aureofaciens fermentation liquors and concentrates containing

chlortetracycline and tetracycline". The article was called to the attention of the Patent Office by Bristol.

25. On December 7, 1954, Bristol had filed a Hatch et al application which cites various articles which have "noted that fermentation broths of Streptomyces aureofaciens contain a mixture of chlortetracycline and tetracycline".

The Accidental, Unrecognized Co-Production of Small, Ineffective Amounts of Tetracycline Does Not Affect the Patentability of Tetracycline.

26. For years before Conover discovered tetracycline in June of 1952, skilled investigators throughout the pharmaceutical industry had been unsuccessfully attempting to discover an improved broad spectrum antibiotic. There are indications that, prior to Conover's discovery of tetracycline, a few investigators had observed the presence of unidentified antibiotics in fermentation broths produced with various strains of Streptomyces organisms. In some instances these phenomena were attributed to contaminants, and in others to faulty analytical techniques. After Conover discovered tetracycline and determined its characteristics and properties and his findings were published, other investigators re-examined their experimental records in the light of Conover's discovery and for the first time

learned that certain of the unidentified materials which had been coproduced with Aureomycin were in fact tetracycline.

27. Unpublished tests made by a few investigators after Conover's invention established that some of the Aureomycin commercially produced and sold prior to Conover's invention date was contaminated with tetracycline in amounts from 2 to 5 percent. Such amounts of tetracycline were insufficient to impart to the old Aureomycin any of the desirable therapeutic properties of tetracycline. The record is undisputed that Aureomycin would be certified by the Federal Government as therapeutically pure Aureomycin even though it contained as much as 10 percent tetracycline. Any tetracycline which had been coproduced with Aureomycin was unrecognized, inconsequential in amount and of no benefit to the public.

28. Conover was entitled to a patent on the product tetracycline irrespective of whether it was coproduced in following the processes of the prior art Duggar and Niedercorn patents, since its coproduction was accidental, unrecognized and in small amounts which did not impart the therapeutic advantages of tetracycline.

29. There are many well-known decisions holding that the prior existence of a product which was of no benefit to the public did not prevent one who later

discovered how to produce such product in a useful condition from obtaining a patent thereon. In his rejection of November 24, 1954, Lidoff cited one of the most celebrated of these decisions, Parke, Davis v. Mulford, 189 Fed. 95 (S.D.N.Y. 1911), aff'd in part, rev'd in part as to another point, 196 Fed. 496 2d. Cir. 1912). Lidoff speculated in his F.T.C. testimony that he may have cited this case erroneously. It is significant, however, that Rosa, plaintiff's patent expert, testified that Lidoff must have cited this case to call attention to the rule that tetracycline might be patentable despite its existence in the prior art.

30. The Duggar and Niedercorn patents refer only to the production of Aureomycin and it is undisputed that they contain no suggestion that any other antibiotic is also formed by the described fermentation reactions.

31. Lidoff admitted in his testimony that his rejection based on inherent coproduction was a "borderline" rejection, "shaky" both on the facts and the law. Regardless, he purported to make a "firm, positive rejection," and he maintained the rejection "for purposes of argument."

Pfizer Understood Lidoff to Be Interested in Co-Production of Appreciable Amounts, Rather than Useless Traces.

32. After reviewing Lidoff's October 14, 1954 Decision on Motions, Pfizer's patent counsel concluded that Lidoff was not rejecting Conover's claims to tetracycline on the fact of coproduction of some useless, small amounts of tetracycline in following the processes of Duggar or Niedercorn; rather, they concluded that Lidoff thought there may be coproduction of substantial or recoverable quantities of tetracycline, and was rejecting the claims on that basis. Immediately upon learning of the Decision on Motions, Mr. Hutz, Pfizer's patent counsel, dictated a memorandum entitled "Notes re Patentability of Tetracycline and Its Hydrochloride Salt Over Duggar and Niedercorn". He sent the memo to Dr. Murphy on October 19, 1954. In his cover letter he described the memorandum as "summarizing my present thoughts on the patentability of the broad claims." In the memorandum, Hutz assumed that the examiner would only be interested in "appreciable" or "recoverable" amounts, rather than simply a "detectable" amount. He stated unequivocally:

> "The examiner's rejection is obviously based on the erroneous presumption that substantial proportions of tetracycline were produced by Duggar and Niedercorn."

33. Hutz's and Murphy's testimony on what was said by Lidoff and themselves during the 1954 interviews is entitled to great weight, since it is based on vivid recollections repeatedly refreshed during the intervening period and it is consistent with the Patent Office record.

34. Hutz and Murphy understood that Lidoff wanted to know whether "recoverable", "appreciable" amounts of tetracycline were coproduced with Aureomycin in the fermentation processes of the Duggar and Niedercorn patents using the NRRL 2209 microorganism. Indeed, Lidoff is described in the Patent Office record as specifically disclaiming any interest in the coproduction of useless traces of tetracycline.

Lidoff Has No Recollection.

35. It was not until September 12, 1966, that Mr. Lidoff first testified about the events of November and December of 1954. Lidoff testified that he remembered none of the facts after the almost twelve year interval between his interviews with Pfizer's patent representatives and his appearance as a witness before the FTC. He had no recollection of what had occurred at those interviews, and admitted that he could not remember even "a single statement" that was said, and indeed, had "no notion of what was said". As he put it,

> "...anything that I say as having recalled something is really a reconstruction in my mind based on what recent review of the record I have had, which has not been in any detail. So that I cannot say that I positively recall one thing or another. But I can reconstruct what my view would have been at that time."

There Could Have Been a Misunderstanding Between Lidoff and Pfizer Regarding the Proof in Which Lidoff Was Interested.

36. Lidoff admittedly failed to actually read any of the documents presented to him. Although Lidoff professes to read affidavits basically it was his testimony that, at best, he merely scans other documents presented to him. "I would have only glanced at that [the Amendment]. I would not have been interested in any remarks he put in the record." Lidoff's practice of scanning was apparently the result of an effort to be highly productive. He testified that he generally acted on 20 to 25 applications a week, whereas the average number of applications acted on by an examiner is 10 a week.

37. All of the rejections a process claims in the various tetracycline applications on the ground of inherent coproduction were written by Mrs. Wendt, an examiner in another division of the Patent Office. Her language was adopted and inserted verbatim in the rejection which then issued under Lidoff's name. And in rejecting product claims to tetracycline on the ground of inherent coproduction, Lidoff simply copied or adapted Mrs. Wendt's process rejection.

38. Lidoff and Mrs. Wendt never discussed the subject of the rejections on any of the tetracycline applications. He was not on close speaking terms with her. In fact,

there was a "coolness" between them, caused by a long simmering disagreement.

39. Mr. Lidoff had very little understanding of fermentation chemistry--which is basic to the coproduction question. He may very well have been quite unsure of exactly what he was interested in.

40. Hutz and Murphy gave Lidoff all the information they understood he was interested in, and he had " no reason to believe otherwise."

It is Most Likely That Lidoff Erroneously Reconstructed His Views, and That He Was Interested In Co-Production Only of Appreciable Amounts.

41. Lidoff's rejection of product claims to tetracycline in dissolving the second interference, and in his subsequent ex parte rejection of Conover, were based on the Minieri application, which disclosed procedures for the fermentation of large enough quantities of tetracycline to permit its economic recovery. Lidoff's own words in the rejection of Conover's claims stress the fact that Minieri showed that "larger proportions" of tetracycline "are produced when the amount of chloride in the fermentation medium is low. ..."

Furthermore, Lidoff appeared to be aware that the prior existence of a chemical compound did not defeat its patentability, since Lidoff himself cited Parke, Davis & Co. v. Hulford.

42. Everything of consequence which occurred at the interviews between Hutz, Murphy and Lidoff on November 29 and December 8, 1954, was reported in the amendments that were filed in the Conover application promptly thereafter, as required by Patent Office Rules 2 and 133(b). Lidoff had ample opportunity to criticize and correct or require correction of any statements in these amendments with which he did not agree. In accordance with established practice in the Patent Office he was obligated to do so if they were erroneous in any material respect. At no time did he indicate any disagreement with such statements, which serves to confirm the accuracy of these statements.

43. Lidoff considered the Tanner-Bogert affidavits and the accompanying amendment during the morning of December 8, 1954, and discussed them with Hutz and Murphy in an interview that afternoon. In this discussion he requested that certain additional information be made of record. If he had been interested in any further information, it is apparent that he would have requested it at the same time. His failure to do so is significant. The requested information was supplied in Bogert's supplemental affidavit submitted

during a further interview on December 9, 1954.

44. In Bogert's supplemental affidavit, he specifically advised Lidoff that he had used a test capable of clearly identifying 20 percent of tetracycline when admixed with Aureomycin. Since this test was not sensitive enough to identify less than 10 percent of tetracycline, Bogert expressly assumed in his affidavit that up to 10 percent of the potency of his recovered amorphous materials might be due to the presence of tetracycline therein. Lidoff expressed no interest in the possible presence of such amounts of tetracycline.

45. The contents of the amendment filed December 8, 1954, and the testimony of both Hutz and Murphy establish that Lidoff expressed no interest in the presence of uselss trace amounts of tetracycline which might be coproduced in the Duggar-Niedercorn broths but rather requested information about recoverable, appreciable amounts. This was the understanding of Hutz and Murphy, and it was the basis on which they arranged for the Tanner-Bogert experiments and submitted information thereon to Lidoff.

> "...the Assistant Examiner agreed that the discovery of the new antibiotic, tetracycline (and its salts), constituted a major advance in the art, that should merit patent protection... However, he stated that applicant's product claims appeared to be anticipated by the possible, although wholly unappreciated, co-production of appreciable amounts of tetracycline in the fermentation processes described in the cited patents." (P. 34)

> "The Examiner made it clear that he would not insist on a categorical averment that the fermentation broths prepared according to the cited patents contain no tetracycline whatsoever. He evidently appreciates the impossibility of proving its non-existence and is not concerned about uselss trace amounts which cannot be separated from the broths by methods now recommended for recovery of the new antibiotic." (P. 37)

> "There are, of course, endless further recovery procedures that might be attempted, most of which would be entirely unsuitable for any practical utilization, but it is understood that the Examiner does not expect an elaborate research program to be carried out in an affort to pick up useless traces of tetracycline that might possibly be present in the broths. The procedures that have been tried are best designed to show whether appreciable amounts of tetracycline are produced, when following the fermentation procedures described in the references." (Pp. 38-39)

> "These results demonstrate that no appreciable amount of tetracycline is formed in the prior art fermentation processes, thereby establishing that the Examiner's assumption is incorrect." (P. 39)

"These results demonstrate conclusively that the two broths tested did not contain appreciable amounts of this antibiotic." (Pp. 48-49)

"Based on these results and on his experience with the results of a great many such tests on materials containing tetracycline, chlortetracycline and mixtures thereof, he is convinced that not nearly as much as 20% of the potency of the amorphous material could be due to the presence of tetracycline, in fact there was no indication whatever of the presence of tetracycline. Assuming that the maximum possible proportion of the total potency due to tetracycline is 10%, this means that the 0.36 grams of amorphous material cannot contain more than about 0.0009 grams of tetracycline." (P. 58)

46. The Pfizer affidavits and amendments repeatedly pointed out that the tests established only that appreciable amounts of tetracycline were not coproduced. Lidoff initially testified in the Federal Trade Commission proceedings that he understood "appreciable" amount to mean any identifiable amount, no matter how small and useless. During Lidoff's recent deposition, however, Lidoff's spontaneous response to a question using the word "appreciable" shows that the term "appreciable" means substantial or considerable to him. Thereafter, Lidoff subsequently admitted that "appreciable" might have a "secondary meaning" of "more than a tiny amount".

47. The Bogert-Walsh application was filed in April 1954, and was pending before Lidoff as of November 1954. Lidoff admitted that he understood that the word "appreciable", as it was used in the Bogert-Walsh specification, meant considerable or fairly large amounts. Lidoff claims in the Bogert-Walsh application to include the phrase "appreciable quantities", in order to distinguish those claims over prior patents which were operable only on the separation of antibiotics in mixtures where there were not large quantities of a second antibiotic present.

48. Parts of the Conover file wrapper, particularly including the affidavits and amendment in question, bore notations in the margins and had been extensively underlined in pencil. Mr. Lidoff identified many marginal notations as his, and initially identified much of the underlining as his, undoubtedly made during the prosecution of the patent. The word "appreciable" in the amendment and affidavits had been underlined in several instances, and Mr. Lidoff testified that it looked like his style of underlining and he could very well have done it. Although he refused to admit categorically that he had underlined "appreciable", it appears probable that Mr. LIdoff, in fact, did the underlining.

49. There is a well-recognized distinction between procedures for recovering an antibiotic from fermentation broths and

analytical techniques for detecting the presence of (identifying) an antibiotic in such broths.

50. Lidoff admitted that he understood the difference between analytical techniques and recovery procedures. Although he denies that he was really familiar with paper strip chromatography, the analytical technique then in wide use to give an indication of tetracycline in the presence of other antibiotics, his testimony establishes that he read at least two detailed descriptions of the use of paper strip chromatography to indicate the presence of tetracycline in broths. He testified that he studied carefully a Rule 131 affidavit filed in January 1954, in the Heinemann application. That affidavit not only contains a lengthy discussion of paper strip chromatography, but also includes copies of the chromatograms. (The same affidavit also clearly shows that tetracycline was coproduced along with chlortetracycline.) Lidoff also testified that in February or March of 1954, he carefully read certain amended claims and page 18 of the Heinemann application, when reexamining portions of that application to ascertain whether the amended claims filed February 3, 1954, added new matter to the application. Both the claims and page 18 of the application contain the results of paper strip chromatography analysis. The technique is also described in detail in the preceding pages of the application. Lidoff agreed that the application explained that paper strip chromatography is an analytical device capable of indicating the presence of tetracycline in broths with mixtures of Aureomycin.

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The Affidavit Experiments Were Fairly Performed and the Results Accurately Reported.

51. After Lidoff's ex parte rejection of Conover's product claims on November 24, 1954, Hutz and Murphy had an interview with him, and they undertook to have certain experiments conducted pursuant to his suggestions in order to determined whether certain prior art fermentation broths contained the appreciable amounts of tetracycline in which they understood he was interested. The manner in which these experiments were conducted and the results obtained were described in the affidavits of Tanner and Bogert. The experiments were properly conducted and accurately reported, and they established that the suggested prior art broths did not contain appreciable amounts of tetracycline.

52. The affidavit experiments were conducted in late 1954 at a time when Pfizer anticipated that, as soon as the patent issued, it would file infringement actions against Bristol, Squibb and Upjohn, and thus subject the patent to close scrutiny in a litigation context. Those infringement actions were filed approximately 30 days after the last affidavit was submitted. Thus Pfizer had the strongest motives to conduct those experiments as carefully as possible and to report the results accurately to the Examiner.

NRRL 2209 Was the Only Publicly Available Strain of S. Aureofaciens, and Lidoff Agreed It Was the Proper Strain to Employ for the Affidavit Tests.

53. The only strain of S. aureofaciens that had been publicly available before Conover's invention date was the original Duggar strain identified as A-377 which had been deposited in the culture collection of the Department of Agriculture at Peoria under number NRRL-2209. Accordingly, in the November 29, 1954 interview, Lidoff agreed that NRRL-2209 was the only culture Pfizer could properly employ for the experiments. At the time, Lidoff was aware that Pfizer had private strains of S. aureofaciens in its possession, inasmuch as the Bogert-Walsh application revealed that fact.

Lidoff Requested That Example 28 of the Niedercorn Patent Be Performed.

54. The Examiner further specified that the fermentation broths be prepared following precisely the Duggar and Niedercorn patents. Since the Niedercorn patent described many different examples of fermentation media, the Examiner selected Example 28 because it employed a medium of low chloride content which he expected would yield "larger proportions" of tetracycline according to the teachings of Minieri et al. Example 28 had been referred to several times specifically in the Decision on Motions. (October 14, 1954).

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55. Pfizer understood that Lidoff was interested in the chloride content of the fermentation medium. In both his Decision on Motions in the second interference as well as his ex parte rejection of the Conover application, Lidoff had stressed the teaching of Minieri that larger proportions of tetracycline would be produced if the chloride content of the medium were low. Therefore, Pfizer took care to point out that although Example 28 Niedercorn had a relatively low chloride medium, one of the ingredients of that medium was tap water, which Pfizer's scientists knew contained chloride ions. Pfizer reported the chloride ion content of the tap water used at the Brooklyn laboratory for the experiments. Corn steep liquor and casein were also used in the fermentation media and Pfizer, knowing they contained chloride ions, reported in detail the chloride ion content of each. This demonstrates the good faith of Pfizer representatives in supplying information to the Examiner which they understood he was interested in.

The Only Available Recovery Procedures Were Applied, Demonstrating That Appreciable Concentrations of Tetracycline Were Not Co-Produced.

56. At the same interview the Examiner stated that the broths produced by following the specified Duggar and Niedercorn examples should be subjected to the preferred recovery procedures described in each of the then pending patent applications of Bogert et al., Minieri et

al. and Heinemann et al. If the broths did in fact contain the large amounts of tetracycline taught by the Minieri et al. application, these procedures would have recovered it in clearly identifiable form. Indeed, the Minieri et al. application expressly taught that if substantial levels of tetracycline were present in the broths Minieri's procedure (Bogert procedure B) would recover it in the form of a "therapeutic product".

57. The three recovery procedures applied by Bogert to the Tanner broths were the only procedures then available for the recovery of tetracycline from fermentation broths. Paper chromatography and Craig counter-current procedures are analytical techniques which are useless for recovering tetracycline from fermentation broths. These techniques are not even suitable for application to the impure amorphous materials which Bogert recovered from Tanner's affidavit broths. The prior art Pidacks column chromatography procedure was discussed with the Examiner but he did not want it used in the requested experiments because it was designed for the recovery of Aureomycin rather than tetracycline.

58. Tanner faithfully duplicated the Duggar examples and Niedercorn Example 28 using the NRRL 2209 organism, and he accurately reported these experiments in his affidavit filed December 8, 1954. He determined in each experiment that the organism had grown profusely and he applied a qualitative test which showed that the resultant broths

possessed recoverable antibiotic activity. He then turned over adequate volumes of each broth to Bogert for the recovery tests.

59. Bogert carefully subjected each of the broths to the preferred recovery procedures disclosed in the Bogert et al., Heinemann et al. and Minieri et al. applications, and he accurately reported these experiments in his affidavits. By means of the described procedures, he recovered small quantities of amorphous solid materials of low potency which he fully described in his affidavit, filed December 8, 1954. The recovered solids contained large amounts of impurities and thus bore no resemblance to the therapeutic product recovered from the Minieri et al. broths. Bogert subjected these recovered amorphous solids to a well known chromogen test which would produce a distinctive color if as much as 20 per cent tetracycline was present, and which would produce a less distinct color with smaller amounts of tetracycline down to about 10 per cent. This test produced no color whatever, so Bogert concluded that the broths tested did not contain appreciable or recoverable amounts of tetracycline and so reported in his affidavit.

60. Both the Bogert et al. and Minieri et al. procedures are capable of recovering tetracycline in clearly identifiable form from broths of low potency provided they contain appreciable amounts of tetracycline. The important factor is the ratio of the tetracycline to the

chlortetracycline - not the total antibiotic potency of the broth. The Duggar-Niedercorn broths described in the Tanner-Bogert affidavits did not contain appreciable amounts of tetracycline, so it was (and is) impossible to recover tetracycline from them in clearly identifiable form by any efficient recovery procedure. Bogert's statement to this effect in his affidavits is fully supported by the record, and is completely accurate. It would have required an elaborate research program, like that performed by Squibb, merely to isolate and identify the useless traces of tetracycline present in those broths.

The Broth Potency Was Representative and Did Not Affect the Results of the Experiments.

61. The Patent Examiner was not informed of the assays to determine the potencies of the two fermentation broths tested by Bogert, because he had expressed an interest only in the recovered materials. However, since the weights and potencies of the recovered materials were referred to and discussed in the Bogert affidavits, it was apparent that these broths were of a low order of potency. Furthermore, the Examiner was so-informed by Conover's representatives during the December 8, 1954 interviews, but he displayed no interest in broth potencies and requested no further details about them.

62. The low potencies of the broths obtained by Tanner do not reflect on the accuracy of his experiments, since they are attributable to the particular strain of S. aureofaciens and the particular media and fermentation conditions which he was required to employ. The higher potencies reported by Niedercorn are attributable to the use of a different strain, rather than to any errors or deviations in Tanner's affidavit tests.

63. The NRRL-2209 organism of Duggar was an original isolate which produced low yields and almost 900 mutants thereof had been developed before an organism capable of producing the yields disclosed by the Niedercorn patent was found. Such a mutant, rather than the original deposited organism, was used to produce the high potency reported in Niedercorn Example 28 and in his other examples.

64. Although the affidavit broths were of a low order of potency, they were better than many of the broths obtained by others who repeated these tests, and were representative of the described experiments. Indeed, Perry was unable to achieve any potency in his attempt to duplicate Niedercorn 28.

The pH of the Broth Did Not Affect the Results of the Experiments.

65. Due to inadvertent typographical errors, first discovered in 1959, Niedercorn Example 23 specifies the use of ten times as much ammonium hydroxide and potassium sulfate as were actually used in Niedercorn's underlying experiment. Tanner was unaware of these errors when he conducted his affidavit experiments. As a consequency, the pH of his Niedercorn 28 broth was 8.1 during the first 6-1/2 hours of the 40 hour fermentation. There was good reason for Tanner not to adjust the pH during the first 6-1/2 hours of the fermentation. First, if the tank is opened during the fermentation, there is a possibility of contaminating the mixture. Second, the Niedercorn patent itself points out that the pH may start relatively high but that it should drop during the course of the fermentation. When it did not drop after a reasonable interval of 6-1/2 hours, Tanner adjusted the pH downward. In the repeat experiments, conducted by Pfizer before the patent issued, the pH of the Example 23 medium was adjusted immediately and the results were not materially different. There is no evidence that a pH of 8.1 for 6-1/2 hours made any difference in the ratio of tetracycline formed in the broths. To the contrary, plaintiff's expert, Dr. Perry, agreed that a variance of a few tenths of a pH is not significant. Although Example 23 does not refer to any specific pH, the Niedercorn patent states that a highly effective growth may be obtained in a range of about 5 to 8, and Example 31 of the patent refers to a pH of 8.1.

Attempts by Others to Duplicate the Duggar and Niedercorn Fermentations Have Produced Results Closely Similar to Those Obtained by Pfizer.

66. Squibb's attempts to duplicate the Duggar fermentation and Bristol's attempts to duplicate those of Duggar and Niedercorn confirmed the accuracy of the affidavit experiments of Tanner and Bogert, inasmuch as it was to Squibb's and Bristol's advantage to obtain substantial amounts of tetracycline from the Duggar and Niedercorn broths. Replication experiments conducted by Tanner and Bogert, after their affidavit experiments, also demonstrated that the results referred to in the affidavits were truly representative of the described experiments. In addition, Dr. Perry's experiments conducted for the plaintiff once again demonstrated that only small amounts, about 4-6%, of tetracycline were coproduced.

The Experiments Conducted in Late October, 1954 Were Not Concealed

67. Since the work performed by Drs. Tanner and Bogert in October, 1954, only showed coproduction of trace amounts of tetracycline, it was not pertinent to the question Pfizer's representatives understood the Examiner was interested in. In any event, there was no effort to conceal that work. Several days before October 25, when Bogert started the tests which revealed the presence of very small percentages of tetracycline, it had been decided to discontinue the elaborate

program outlined in Murphy's instructions of October 15, 1954, to Tanner and Bogert. The testimony of Murphy and Hutz establishes that such a decision was reached on October 21st or 22nd following Hutz's visit to Brooklyn where he learned how extensive the program was. Bogert testified that Murphy had instructed him to cancel this program before he did any of the work. Both Murphy and Hutz assumed that the program outlined to Drs. Tanner and Bogert had been discontinued and were later, in the course of Bristol's discovery proceedings, surprised to learn that Dr. Bogert had on his own initiative proceeded to test the Niedercorn Example 1 broth furnished to him by Tanner. Bogert certainly made no effort to conceal either the tests or their results, since he duly reported his conclusions based thereon in his monthly report for November 1954. Nor is the fact that Bogert did not enter the results in his regular notebook significant, since he did not always record his work in a notebook. Tanner did enter his work in his regular notebook, and of course Bogert preserved the notes of his work, and produced them in response to an informal request from Bristol early in the course of Pfizer's infringement action.

The Narrow Claims In the Patent Were Not Subject to the Rejection Lidoff Now Professes to Have Been Making, and Show That Pfizer Had No Motive to Defraud the Patent Office.

68. At the time of the November 29, 1954 interview, Hutz, Murphy, Lidoff and Surle

discussed additional narrower product claims to be added "as insurance against some wholly unrecognized prior production of ineffective amounts" of tetracycline. The narrow claims were added on the assumption that useless traces may be present in broths produced by following the Duggar and Niedercorn processes. Lidoff testified in his recent deposition that his rejection would not have applied to the Conover narrower product claims, specifically claims 15 through 18 of the patent, and that those claims were novel regardless of such coproduction. Inasmuch as those claims would cover any antibiotic composition whose activity is due primarily to the presence of tetracycline,and therefore would effectively provide total protection for any use of tetracycline as an antibiotic, Pfizer would not have had any motive to deliberately mislead Lidoff in an attempt to obtain the broader superfluous product claims to tetracycline per se.

69. Lidoff testified that it was very likely that he agreed that Conover's discovery of tetracycline constituted a major advance in the art, and that the discovery of tetracycline should merit patent protection within the limits of the patent laws. The difficulty Lidoff now claims he had with the product claims he did reject for lack of novelty was essentially a technical one of the way the claims were phrased.

3. Cyanamid's proposed findings of fact 17 - 120 inclusive filed January 25, 1974.

E. THE IMPORTANCE OF RESEARCH AS A FACTOR IN THE OPERATION OF CYANAMID'S PHARMACEUTICAL BUSINESS

17. Cyanamid entered the pharmaceutical business in 1930 when it acquired Lederle Laboratories, which at the time was a relatively small producer of vaccines, serums and other biological products. Cyanamid continued to operate Lederle on that basis until 1939, when Cyanamid's management decided to change the character of Lederle's business by embarking upon a costly program of research with the objective of discovering drugs that might conquer major diseases and, as a consequence, substantially improve Lederle's sales and profit position. The decision was, in effect, to change a stable, old line, relatively low-profit

biological business into a high-risk, research oriented enterprise that would gamble on its ability to develop new products, which, if they satisfied sufficiently important medical needs, might achieve substantial growth and profits for Lederle. Cyanamid's management thereafter placed heavy emphasis on an extensice, long-term program of research to develop new and improved pharmaceutical products. The continuance and success of that long-term program was regarded as an important factor in making major marketing and pricing decisions. In 1947, the year prior to Cyanamid's introduction of Aureomycin, its expenditure for research and development amounted to $4.6 million, or about 14% of Lederle's total net sales for that year. That dollar expenditure increased over the years; in 1951 it increased to $7.6 million; in 1952 it was

$8.8 million; in 1954 it increased to $10.5 million; and in 1957 it was $12.7 million. During the period 1939 to 1960 Lederle's total expenditure for research and process development amounted to $140.8 million.

Cyanamid's management believed that progress and success in the pharmaceutical business depended upon research and the continued discovery of new and improved drugs, since even the more successful products were apt to become rapidly obsolete under the pressure of competitive research. The optimum commercial life of a new drug tended to run in the range of five or six years before its position in the marketplace was affected by new developments and improvements. The obsolescence factor is illustrated by Lederle's experience with anti-infective products. Lederle's first major development in the field, a line of

pneumonia sera, was made obsolete overnight with the discovery and introduction in the 1930s of the sulfa drugs. During World War II, penicillin was developed and it thereafter supplanted the sulfa drugs. In 1948, Aureomycin was introducted as the first "miracle drug." Approximately five years later, tetracycline was introduced and Aureomycin became obsolete.

A portion of Cyanamid's research operations has led to the development of important and widely used drug products, among which were its broad spectrum antibiotics Aureomycin (1948), Achromycin (1953) and Declomycin (1959).

F. CYANAMID'S PROFIT OBJECTIVES FOR ITS PHARMACEUTICAL BUSINESS

18. In conducting its pharmaceutical business, Cyanamid's management had a general target objective of about a 15% net profit, after taxes, on the sales of

Lederle's entire line of pharmaceutical products. That objective for the business of the Lederle division as a whole was deemed appropriate in view of the business risks involved, past experience and the requirement for future research and business programs. The Lederle division carried many pharmaceutical products in its line which were very beneficial from a medical standpoint, but produced little or not profit, and its leading specialty products, such as Aureomycin and Achromycin, were the main supports of the entire line. For example, in 1952 Lederle carried a total of 405 separate products in its line, 175 of which were unprofitable.

Due in part to the business success it achieved in selling its Aureomycin and Achromycin products, Cyanamid's Lederle division did obtain net profits consistent with its general long term objectives.

19. Cyanamid's target objective of about 15% net profit, after taxes, on its sales was not unusual in the pharmaceutical industry. The management of Parke, Davis and Co., Cyanamid's closest competitor in the broad spectrum antibiotics business, also had a general target objective of about 15% net profit on its entire product line.

PART TWO

THE DISCOVERY, INTRODUCTION AND MARKETING OF AUREOMYCIN, TERRAMYCIN AND CHLORAMICETIN IN THE 1948-1953 PERIOD (PRIOR TO THE DATE OF ANY ALLEGED CONSPIRACY)

A. AUREOMYCIN

Discovery and Introduction of Aureomycin

20. Aureomycin, the first broad spectrum antibiotic, was discovered by Dr. Benjamin Duggar of Cyanamid and was a result of Lederle's extensive research program. The discovery was a major development in the history of medicine, as Aureomycin proved effective against a far wider range of diseases than were the earlier narrow spectrum antibiotics, such as penicillin and streptomycin.

21. This new broad spectrum antibiotic was introduced on the market in December 1948. It received rapid acceptance by the medical

profession and sales were substantial. Cyanamid, which had expended substantial sums of money and years of work in research, development and testing of the product, decided to promote it as a Lederle specialty product under the Aureomycin trade name and not to license or sell in bulk to other suppliers.

Cyanamid's Patent Rights on Aureomycin

22. Dr. Duggar's discovery was patented. The Duggar patent (U.S. Patent No. 2,482,055) issued to Cyanamid in September, 1949, broadly covering the product Aureomycin and fermentation processes for its preparation with strains of the Duggar microorganism Streptomyces aureofaciens (hereafter "S. aureofaciens"). In 1952, the Niedercorn patent (U.S. Patent No. 2,609,329), covering improvements on the Duggar

fermentation process, was issued to Cyanamid. Those patents gave Cyanamid the lawful right to exclude all others from making, using or selling the inventions covered by the claims of the patents.

B. INTRODUCTION OF DIRECTLY COMPETITIVE BROAD SPECTRUM ANTIBIOTIC PRODUCTS BY PARKE, DAVIS AND PFIZER

23. Shortly after Cyanamid introduced Aureomycin, Parke, Davis brought on the market (in late January of 1949) its new broad spectrum antibiotic, Chloromycetin. In March of 1950, Pfizer introduced Terramycin as the third broad spectrum. Both Chloromycetin and Terramycin, after their introductions, were successful in gaining physicians' prescriptions and sales in competition with Aureomycin.

C. PRICING DURING THE 1948-1953 PERIOD

Cyanamid's Initial Pricing of Aureomycin

24. Cyanamid introduced Aureomycin in December 1948 at a net trade price (i.e., price to retailers) of $15.00 for a bottle of sixteen 250 mg. capsules, the quantity of a common prescription for four days of treatment. That price was established by the General Manager of Lederle (Dr. Malcolm) as a result of his independent assessment of three factors: (1) the price for a course of treatment with Aureomycin as compared to the cost of a course of treatment with existing competitive drugs recommended for the same purpose, such as penicillin, streptomycin and the sulfa drugs; (2) the overall income objectives for the Lederle division; and (3) the risks of obsolescense coupled with a continuing heavy level of research expenditures.

The 1949-1951 Price Reductions

25. Between January 1949 and October 1951, prices on the new broad spectrum antibiotics then on the market went through a series of four published price reductions, resulting in an overall reduction of about 66%. Each of the four reductions, initiated by one or another of the three competitors, was promptly matched by a similar reduction on the competitive product or products.

26. In view of savings resulting from production efficiencies and the rapid acceptance of Aureomycin by the medical profession, and in anticipation of Parke, Davis' reported introduction of a competitive antibiotic, Cyanamid reduced its Aureomycin prices by one-third, effective February 1, 1949, to all trade classes, with a resulting net trade price of $10.00 on a bottle of sixteen 250mg.

capsules. Parke, Davis came on the market with Chloromycetin at this same net trade price, but with some differences in prices to other customer classes.

27. In the latter part of 1949, or very nearly in 1950, Cyanamid's management learned of the imminent appearance on the market of Pfizer's Terramycin. Accordingly, the General Manager of Lederle, Dr. Malcolm, decided upon a further reduction in the Aureomycin price -- one which had been under consideration during 1949 as production efficiencies and sales continued to develop -- and on February 1, 1950, the published Aureomycin price to all customer classes was reduced 20%, resulting in a new net trade price of $8.00 for a bottle of sixteen 250 mg. capsules. This second Cyanamid reduction was promptly matched by Parke, Davis. Pfizer, however, introduced Terramycin in

March of 1950 at a premium over Aureomycin and Chloromycetin -- $8.40 at net trade -- in the hope of creating an atmosphere of superiority for its new product. Pfizer's attempt to maintain a premium price for its new product proved unsuccessful.

28. Cyanamid reduced its published Aureomycin price for a third time, by an additional 25%, on May 1, 1950 in order to meet a price cut initiated by Parke, Davis on Chloromycetin. This resulted in a new net trade price of $6.00 on Aureomycin, with proportionately the same reduction effected to all other trade classes. Pfizer also matched the Parke, Davis move, so that all three competing broad spectrum antibiotics were then available at the same published net trade price.

29. Pfizer initiated the fourth decrease, on September 27, 1951, by

announcing a 15% cut on its published Terramycin prices -- or a new net trade price for sixteen 250 mg. capsules of $5.10. Cyanamid met that reduction, extended proportionately to all customer classes, on October 1, 1951, as did Parke, Davis.

Cyanamid's Pricing Policy Established as Result of 1949-1951 Experience

30. As a result of its experience with the 1949-1951 price reductions, Cyanamid's management independently concluded that it would be unlikely to achieve any competitive advantage by initiating further reductions in the prices of its broad spectrum antibiotic products because any such reduction most probably would be met immediately by Cyanamid's competitors. It was also the judgment of Cyanamid's management that a general price reduction would not lead to any increase in usage and

the overall volume of sales (which largely depended upon the incidence of disease rather than the level of prices), but would simply lead to lower revenue. Furthermore, it was believed that the net trade price established as of October 1951 was fair, reasonable and competitive, and satisfied the income requirements for the Lederle division.

31. Therefore, while Cyanamid felt free at all times to reduce prices and considered such reductions from time to time its management concluded that the best policy, consistent with its overall income objectives for Lederle, was of pricing at competitive levels, of meeting initiatives of competitors, but of not itself initiating price reductions unless it saw the probability of achieving a competitive advantage. That policy was adopted by Cyanamid's management prior to the time it

allegedly entered into conspiracy.

Pricing on Broad Spectrum Antibiotics in Period October 1951-November 1953

32. Published prices on Aureomycin, Chloromycetin and Terramycin remained substantially uniform and unchanged from October 1, 1951 to the fall of 1953 (when plaintiff contends Cyanamid entered into conspiracy with Pfizer).

D. THE SALES VOLUME PATTERN DURING THE 1948-1953 PERIOD

33. During the 1948-1953 period, there was significant shifts in sales volume among Cyanamid, Pfizer and Parke, Davis. While Cyanamid's sales of Aureomycin were substantial during the period 1950-1953 (i.e., from the introduction of Pfizer's Terramycin to the introduction of tetracycline), they had shown a steady,

gradual decline. Cyanamid's sales went from $39.4 million in 1950 to $32 million in 1953. During the same period, the relative sales volume of Terramycin had increased at a rapid rate. Within two years after its introduction, Terramycin was outselling both Aureomycin and Chloromycetin. Parke, Davis lost substantial sales volume in 1952 and 1953 because of adverse reports on harmful side effects of Chloromycetin (aplastic anemia). At the same time, Cyanamid lost position to Terramycin because of increasing reports of some untoward (but far less serious) side effects from Aureomycin. The situation was such that, during early and mid-1953, coincident with Cyanamid's discovery and development of tetracycline, Cyanamid's management had become seriously concerned about the future prospects of Aureomycin.

PART THREE

PROPOSED FINDINGS RELATING TO THE ALLEGED CYANAMID-PFIZER CONSPIRACY TO EXCLUDE COMPETITORS AND MONOPOLIZE

A. THE DISCOVERY OF TETRACYCLINE AND CYANAMID AND PFIZER'S PATENT APPLICATIONS

By Pfizer

34. On August 8, 1953, the Journal of the American Chemical Society received an article (hereinafter called the "Stephens Article") which later was published in the Journal's October 5, 1952 issue, in which a Dr. Stephens and other Pfizer scientists, including Dr. Conover, set out the chemical structures of Aureomycin and Terramycin and gave a postulated structure for a third antibiotic called tetracycline, although it did not disclose how, or if, such a new antibiotic could be made. In June of 1952, Dr. L. H. Conover of Pfizer had produced tetracycline by catalytic hydrogenation of

Cyanamid's patented product Aureomycin.

On October 23, 1951, Pfizer filed the original Conover application for a patent claiming the product tetracycline, its salts, and a process for producing it by deschlorination of Aureomycin. On October 9, 1953, Pfizer filed a continuation-in-part application with similar claims which were eventually allowed.

By Cyanamid

35. In 1948, certain Cyanamid scientists under Dr. John Morton, who were conducting analytical tests on Aureomycin by means of hydrogenation, produced some unknown and unidentified substances. After the publication of the October 1952, Stephens article, Cyanamid reopened its 1948 investigations and found that at least one of the products then produced had a chemical analysis similar to the

theoretical analysis of tetracycline.

However, as appeared from a later exhaustive review, the results of the work were inconclusive, and Cyanamid was forced to conclude that standing alone it would be deemed by the Patent Office to be no more than an abandoned experiment.

In December 1952 or January 1953, Dr. James H. Boothe of Cyanamid produced tetracycline by deschlorination of Aureomycin.

On March 16, 1953, Cyanamid filed an application for a patent claiming the product tetracycline and the deschlorination process, in the names of Dr. James Boothe and Dr. John Morton. Cyanamid's patent lawyer, Harvey W. Edelblute, hoped at the time that the combination of Morton's 1948 work and Dr. Boothe's more recent experiments might enable Cyanamid to claim an early date of

invention.

Publication of Pfizer's and Cyanamid's Discoveries

36. In August 1953, scientists of each of Cyanamid and Pfizer separately submitted articles to the Journal of the American Chemical Society describing the production of tetracycline by the deschlorination of Aureomycin. Both articles were published in the September 20, 1953 issue of the Journal.

B. CYANAMID'S GAMBLE TO SWITHC TO TETRACYCLINE AT THE EXPENSE OF AUREOMYCIN

The Superior Qualities of Tetracycline

37. During the early part of 1953, Cyanamid conducted clinical and other scientific work on tetracycline which indicated it was greatly superior to Aureomycin in many respects, particularly in having fewer adverse side effects. As a result of

the studies, Cyanamid's management became convinced of tetracycline's superiority over Aureomycin and other antibiotics then on the market.

Cyanamid's Market Position and its View as to How Tetracycline Might Affect This

38. Cyanamid had been first to market to broad spectrum antibiotic, Aureomycin, in 1948, but after Terramycin was introduced by Pfizer in 1950, Cyanamid began to lose ground to Pfizer in sales. When Cyanamid learned of the superiority of tetracycline over Aureomycin, it decided by mid-summer of 1953 to shift its emphasis to tetracycline and to gamble on the virtual abandonment of Aureomycin (despite its great success and its enormous importance to Cyanamid's business). The decision was made because of the medical superiority of tetracycline and the declining commercial

position of Aureomycin.

Cyanamid's Plans for Introductory Marketing of Achromycin to Gain Competitive Advantage over Existing Broad Spectrum Antibiotics

39. Cyanamid made its business decision to gamble on tetracycline and virtually abandon Aureomycin, it went ahead with plans for a very substantial promotional and marketing campaign, the largest it ever employed, to introduce the new drug on the market under the brand name Achromycin. The decision was made to price it at the same level as the existing broad spectrum antibiotics in order to eliminate any possible price barrier to rapid market acceptance. Cyanamid's management believed that it would have a powerful competitive weapon in a superior product which would be available at the same price as competitive products. By the first of November 1953, Cyanamid was on the verge of launching

Achromycin on the market. The top marketing and sales managers had commenced a series of regional sales meetings around the country at which the details of the marketing program on Achromycin, including the introductory price, were announced to the field sales staff. Directions were given to spend all possible time on promotion to the medical profession of Achromycin, emphasizing its superiority over Aureomycin and the other existing antibiotics. By the time Dr. Malcolm was contacted by Mr. McKeen of Pfizer on or about November 5th or 6th, 1953, Cyanamid was "at a point of no return" on its commitment to Achromycin.

C. THE CYANAMID-PFIZER AGREEMENTS SETTLING THE FIRST INTERFERENCE AND DISSOLVING THE BLOCKING SITUATION ON TETRACYCLINE

The Background to the Settlement

40. It was on the eve of Cyanamid's launching of its substantial marketing and promotional program on its new product Achromycin, and at a time when Cyanamid was thoroughly committed to a huge commercial risk that the Patent Office on October 29, 1953 issued "notices to copy claims" in connection with Cyanamid's Boothe-Morton and Pfizer's Conover applications on tetracycline and the deschlorination process. The notices each indicated that there would be an interference proceeding to determine priority of invention.

Although Conover of Pfizer had first produced tetracycline in June of 1952, Pfizer knew of no process for producing tetracycline commercially other than by deschlorination of Cyanamid's Aureomycin. Consequently, it could not enter the business without a license under Cyanamid's Duggar patent and, lacking that, had taken

no steps toward commercial production. However, during the late summer and early fall of 1953, Pfizer learned from trade publications, reports from the field, and an antibiotics symposium that Cyanamid was probably going to market tetracycline and believed it superior to any existing antibiotic and that Cyanamid knew how to produce tetracycline by deschlorination. When it received the Patent Office's October 29, 1953 notice indicating an interference proceeding on tetracycline, Pfizer concluded that Cyanamid was probably to be the other party.

The Malcolm-McKeen Meetings

41. On November 5th or 6th, 1953, John McKeen, Pfizer's President, called upon Dr. Wilbur G. Malcolm, then Lederle's General Manager, intending to use what he believed to be Pfizer's strong patent position to

work out a settlement of the interference which would enable Pfizer to get into the tetracycline field by giving it access to the necessary Aureomycin starting material.

After confirming that Cyanamid was indeed the other party to the impending interference, McKeen proposed to Malcolm; (1) a settlement of the interference by determination of priority of invention on the basis of an exchange of evidence of priority, and a license by either party obtaining a tetracycline or deschlorination patent to the other; (2) a license to Pfizer under Cyanamid's Duggar patent to make Aureomycin to deschlorinate into tetracycline; and (3) that as a condition to any settlement, Cyanamid must provide Pfizer with Aureomycin know-how and sell Pfizer enough bulk tetracycline to enable it to get into the market at once. McKeen threatened that if Cyanamid proceeded with

the marketing of tetracycline without acceding to all these conditions, and if Pfizer thereafter obtained a tetracycline patent, Pfizer would then refuse to license Cyanamid or would demand an exorbitant royalty.

Dr. Malcolm gave no answer to McKeen's proposal at the first meeting and stated that he needed time to consider the matter and discuss it with other members of Cyanamid's management.

Cyanamid's management appreciated that if faced an enormous commercial risk. It had committed itself to Achromycin as superior to Aureomycin, was shifting to Achromycin as its major product, and had made substantial expenditures in the process. With Cyanamid on the eve of launching Achromycin on the market, Malcolm felt he was "at a point of no return". Cyanamid feared that Pfizer might well have

priority of invention, knowing that Cyanamid had not produced tetracycline until some months after publication of Pfizer's Stephens article. A contested interference might take some years; and if Pfizer won, it would be in a position to stop Cyanamid from making what would then be Cyanamid's major drug product, or at least demand excessive royalties. While Cyanamid, with its Duggar patent, could also prevent Pfizer from making tetracycline Pfizer could continue to promote and sell Terramycin, while Cyanamid could not effectively return to Aureomycin, which it would by then have downgraded in promoting tetracycline's superior qualities. Weighin these considerations, Cyanamid's management as a matter of business judgment, decided that a settlement was the most reasonable course to follow and it authorized Dr. Malcolm to

negotiate such a settlement in response to McKeen's proposal.

A second meeting was held, about a week or ten days later, attended by Dr. Malcolm, George Martin (Cyanamid's chief counsel and Vice-President), Mr. McKeen, and John Powers (Pfizer Vice-President). At this meeting, the parties agreed upon the general terms for settling the proposed interference and delegated to their respective counsel the working out of the necessary details and papers.

After the formal declaration of the interference on December 28, 1953, two written agreements were executed on January 11, 1954. One was a license by Cyanamid to Pfizer to make Aureomycin for deschlorination, and the other was an agreement to settle the interference. The settlement of interferences by agreements of this type, involving an exchange of

evidence of priority, was at the time a very customary procedure.

Significant Terms of the Cyanamid-Pfizer Agreements, and their General Effect

42. The more important provisions of the two agreements executed on January 11, 1954 were:

(a) The parties to exchange evidence of priority of invention as to the interference counts -- tetracycline and the deschlorination process -- and if they could not agree on priority the question was to be submitted to the Patent Office for decision. The party found not prior was to take the necessary steps to concede priority in the Patent Office. Either party owning a patent (covering presently existing inventions owned by such party at the date of teh agreement or a deschlorination process, licensed the other non-exclusively to make, use and sell tetracycline, for a royalty of 2-1/2% of the licensee's net tetracycline sales payable to the party owning a product patent, if any. There were limited provisions for exchange of know-how as to deschlorination.

(b) Cyanamid licensed Pfizer non-exclusively, for a royalty of 2-1/2% of Pfizer's net tetracycline sales, to make Aureomycin for use in producing

tetracycline by deschlorination and agreed to furnish Pfizer, over a period not exceeding six months, knowhow owned by Cyanamid at the date of the agreement for manufacturing Aureomycin to make tetracycline.

(c) In addition to the licenses being nonexclusive, it was expressly provided that nothing in the settlement agreement was to be deemed to impair the right of a patentee to license others.

(d) Both agreements contained provisions for computing royalties on bulk sales of tetracycline.

(e) Neither agreement referred to prices at which tetracycline might be sold.

The agreements were the result of arm's length bargaining, in which Cyanamid's aims were to insure that it would be able to continue the manufacture and sale of the product which it was in the process of making its principal antibiotic, without being blocked by the patent covering that product which it justifiably feared might issue to Pfizer, and Pfizer's aims were to avoid being blocked by Cyanamid's Duggar

patent and to insure that it could begin to compete in the market as rapidly as possible.

The agreements do not evidence any common plan or aim to exclude others from competing or to restrain competition between the parties. Their effect was, in fact, to make it possible for Cyanamid and Pfizer to compete and continue competting in the manufacture and sale of a new antibiotic.

Bulk Sale by Cyanamid to Pfizer

43. McKeen strongly insisted, as a condition to entering into any agreement, that Cyanamid must begin to ship to Pfizer, even before the declaration of an interference, enough bulk tetracycline to enable Pfizer to get on the market reasonably promptly. Malcolm acceded to this condition to avoid Cyanamid's being

later blocked from continuing in the market by a Pfizer patent. Malcolm knew that shipments of tetracycline could always be stopped if no final CyanamidPfizer agreement was reached or no interference declared and that Cyanamid, with its Duggar patent, could block Pfizer from further producing tetracycline. In addition, Cyanamid, which was geared to introduce Achromycin on the market, could go forward promptly with an extensive promotional campaign on its brand Achromycin to take maximum advantage of its lead time. The price to be paid for the bulk was "haggled over" and was the subject of hard bargaining between the parties during their negotiations.

Shipments of bulk tetracycline by Cyanamid to Pfizer began November 25, 2953 and continued to March 31, 1954. A total of 10,001,500 grams of bulk tetracycline

were shipped at a total sales price of $3,875,450.

Cyanamid's Concession of Priority to Pfizer

44. After execution of the interference settlement agreement on January 11, 1954, representatives of Cyanamid and Pfizer exchanged evidence of priority and engaged in an exhaustive review and discussion of the evidence. Cyanamid's representatives finally concluded that Conover had priority over Boothe and Morton, and there is no indication in the record that such was not the case. On February 2, 1954, Cyanamid filed in the Patent Office a concession of priority. This method of settling an interference through the exchange of priority was a common one in the pharmaceutical industry, which Cyanamid had

normally used in the past.

Absence of Unlawful Agreements or Understandings

45. There was no agreement or understanding between Pfizer and Cyanamid in connection with their settlement of the first interference or otherwise that they would try to keep competitors from entering the tetracycline field, refrain from licensing or selling bulk to others, or fix and maintain selling prices. This is shown by the uncontradicted testimony of the four persons who participated in the negotiations of the settlement, by the contemporaneous handwritten notes of George Martin, and by the absence of any sort of restrictive provisions from the written agreements themselves or in the numerous drafts thereof prepared during the negotiations.

There is no competent evidence of any

agreement or understanding against licensing others, and in fact, as appears in later findings, Cyanamid within a year did license Bristol, without any consultation with Pfizer, at a time (a) when Cyanamid's management believed Bristol would need no license from Pfizer and (b) about one year prior to the date when Bristol is alleged to have joined into conspiracy with Cyanamid.

D. CYANAMID'S ACQUISITION OF HEYDEN'S ANTIBIOTICS BUSINESS

Heyden

46. For some time prior to the fall of 1953, Heyden Chemical Company had been an efficient producer of penicillin, streptomycin, dihydrostretomycin and neomycin. While Heyden's Antibiotics Division had sustained losses in 1952 and 1953 on its penicillin operation, in the

first nine months of 1953, it realized a gross profit of $276,700, and it had gross profits of $501,600 on streptomycin and $119,900 on neomycin. Heyden had a modern plant for the production of antibiotics.

Negotiation of Purchase and Cyanamid's Purpose in Making Acquisition

47. In late September or early October 1953, Mr. Remensnyder, President of Heyden, initiated discussions with Dr. Malcolm which led to Heyden's sale of its antibiotics business to Cyanamid. Remensnyder called upon Malcolm and told him that Heyden was going to get out of the antibiotics business and devote itself solely to the chemical business and wished to know whether Cyanamid would be interested in purchasing its antibiotics assets. Heyden had been considering getting out of the antibiotics business, and its development of a tetracycline

producing process gave it something to exploit with prospective purchasers. Cyanamid was the most logical customer because its Duggar patent would have blocked use of Heyden's process by anyone else, since it used S. aureofaciens and co-produced Aureomycin.

Remensnyder referred to and "held out as bait" the fact that Heyden had made a patent application on tetracycline and a direct fermentation process for producing it. Malcolm discounted the importance of Heyden's patent position on tetracycline because he did not believe Heyden could have the priority position of Cyanamid of Pfizer. Malcolm was sure that the Duggar patent in any event would block Heyden because he believed its process would necessarily use S. aureofaciens and produce some Aureomycin as well as tetracycline.

However, Cyanamid had other interests in Heyden's antibiotics division. Heyden's penicillin facilities, Malcolm thought, might possibly be used to produce penicillin cheaply for use in Cyanamid's existing animal feed business, and a new development on streptomycin might make Heyden's streptomycin facilities valuable. Heyden had an excellent plant at Princeton, with laboratories so built that they could be converted to research laboratories, and its physical plant had some attraction since Cyanamid was considering decentralizing its antibiotics facilities.

On November 4, 1953, therefore, the two companies executed a formal agreement for Cyanamid's acquisition of the assets and business of Heyden's antibiotics business. The assets included Heyden's antibiotics plant and its patent and patent applications, including the Minieri

application. The total purchase price was $13,757,626. The acquisition was consummated at a closing on December 1, 1953. Cyanamid did not inspect or receive a copy of the Minieri patent application until the December 1st closing.

While Heyden's possible tetracycline process patent position was of some interest to Cyanamid, the primary motivation of Cyanamid in making the purchase was the acquisition of Heyden's plant and its streptomycin, penicillin and neomycin business. Heyden could not have gone into or remained in the tetracycline field without a license from Cyanamid, since the use of the Minieri process would have infringed Cyanamid's Duggar patent.

Absence of Unlawful Agreement or Understanding with Pfizer of Anyone Else

48. The acquisition of Heyden by Cyanamid was not discussed by Cyanamid with

Pfizer or anyone else and was not the result of any conspiracy, agreement or understanding between Cyanamid and Pfizer. Indeed, the Heyden-Cyanamid negotiations and the formal execution of the purchase agreement took place prior to the first meeting between Malcolm and McKeen on November 5th or 6th, 1953, when it is alleged the conspiracy was initiated.

E. THE SECOND (OR SALT) INTERFERENCE: THE PFIZER (CONOVER) - CYANAMID (MINIERI) - BRISTOL (HEINEMANN) INTERFERENCE ON TETRACYCLINE HYDROCHLORIDE

The Circumstances of the Inclusion of Cyanamid's Minieri Application in the Second Interference

49. After priority had been awarded to Pfizer in the first interference, on February 9, 1954, Pfizer's Washington lawyer was told by Patent Examiner Lidoff that there would be a delay in allowance of the Conover application by reason of a

prospective second interference. Hutz, Pfizer's patent lawyer, then telephoned Edelblute, Cyanamid's patent lawyer, to tell him of this. Hutz may have done this because he was suspicious that Cyanamid, despite its concession of priority, was trying to get another interference set up, or he may merely have felt Edelblute was entitled to know of it since Cyanamid had conceded priority and would be required to pay royalties when a patent issued. Edelblute told Hutz that if there was going to be another interference he was going to try to get Cyanamid into it. Hutz did not suggest or recommend this course of action to Edelblute.

50. After the Patent Office issued a rejection of Cyanamid's Boothe and Horton application on February 12, 1954, based on Cyanamid's concession of priority, Edelblute went to see Lidoff and urged the

inclusion of Minieri in any new interference. He pointed out that while Boothe and Horton had conceded priority and the Minieri product claim to tetracycline had been withdrawn (because Cyanamid had been required by Patent Office rules to elect whether to pursue the Boothe and Horton or the Minieri application in the first interference), Minieri's claims to various tetracycline salts had not been withdrawn, so that this application would still be as eligible as others to participate in any new interference involving salts of tetracycline.

51. Bristol had persuaded the Patent Office, in connection with an application by Heinemann, et al., that the salt, tetracycline hydrochloride, was patently distinct from tetracycline. The Patent Office therefore declared the second interference on March 2, 1954, the

interference count being tetracycline hydrochloride, and the parties being Conover, Heinemann and Minieri.

52. Cyanamid independently sought inclusion in the interference for legitimate reasons and to protect its own interests. Edelblute wished Minieri to be made a party so as to keep Cyanamid advised of developments, which was important becasue Aureomycin was being "scuttled" for tetracycline, and every day this went on it became more important to know who got the patent. Edelblute also wished to get fermentation processes into interference if possible, and if Bristol were the third party in the interference (as it turned out it was), to check on Bristol's fermentation work and its probable infringement of Duggar. Finally, he wanted to get Minieri a product patent if possible, although he thought this was doubtful because he

believed tetracycline hydrochloride was not patentably distinct from tetracycline. Pfizer did not want Cyanamid included and subsequently moved to exclude Cyanamid.

The Motions of the Parties
in the Second Interference

53. The parties filed an vigorously argued eleven motions in the second interference resulting in a 500 page record. The more important motions fell generally into three categories:

(a) Pfizer and Cyanamid each moved to exclude Bristol on grounds: (i) that the Heinemann application did not sufficiently describe the tetracycline-producing organism used by Heinemann and that no public deposit of the organism had been made; and (ii) that the Stephens article, disclosing tetracycline more than a year before Heinemann's application, barred Heinemann's claim to tetracycline

hydrochloride, which was not patentably distinct from tetracycline. Bristol opposed those motions on the grounds that the disclosure of Heinemann's organism was sufficient and that tetracycline hydrochloride was patentably distinct from tetracycline. Pfizer also moved to exclude Cyanamid on the ground that Minieri had not deposited an organism, and Cyanamid opposed on the ground Minieri's disclosure was sufficient.

(b) Pfizer and Bristol each moved to exclude Cyanamid, basically on the theory that it was estopped by Boothe and Morton's concession of priority in the first inference. Pfizer again urged that tetracycline hydrochloride was not patentably distinct from tetracycline. Bristol argued in effect that since Boothe and Morton had claimed tetracycline hydrochloride as well as tetracycline,

Cyanamid could have brought that claim as well as the claim to tetracycline into the earlier interference and, not having done so, was estopped by its previous concession. Cyanamid opposed those motions by arguing that the previous concession had related only to tetracycline, that in setting up the second interference that Patent Examiner had held that tetracycline hydrochloride was patentably distinct from tetracycline, and that, so long as the Examiner adhered to his position, Cyanamid was entitled to remain in the interference on the merits, since Minieri might have been the first inventor of tetracycline hydrochloride.

(c) Cyanamid and Bristol each made motions to amend for the purpose of placing fermentation process claims in interference between them. Pfizer opposed those motions, in substance on the ground that

the proposed claims did not adequately describe the tetracycline-producing organisms.

If Cyanamid's motion to oust Bristol on the basis of the Stephens article were granted, this would also presumably mean that Pfizer's and Bristol's estoppel motions against Cyanamid would be granted, since the Cyanamid motion was based on the absence of patentable distinction between tetracycline and tetracycline hydrochloride and the Pfizer and Bristol motions were based on a concession of priority as to tetracycline.

However, although Edelblute believed that as a matter of law tetracycline hydrochloride was not patentably distinct, and that Cyanamid therefore had little chance at a product patent, he sought to keep alive any chance there might be, by opposing the estoppel motions and seeking

to remain in the interference to try to show Minieri's priority, so long as the Examiner adhered to the position that tetracycline hydrochloride was separately patentable. Edelblute believed that if Cyanamid could not obtain a product patent it was in Cyanamid's interest that Pfizer rather than Bristol should obtain one, since Pfizer had agreed to license Cyanamid. However, this does not show a conspiracy between Cyanamid and Pfizer to eliminate Bristol and obtain a patent for Pfizer, since his actions were in Cyanamid's independent interest and since, as has been seen, the PfizerCyanamid agreements were the result of a blocking situation and did not involve agreement to exclude others.

Cyanamid's motion to bring fermentation process claims into interference, which was opposed by Pfizer, demonstrates the absence

of conspiracy to obtain a patent for Pfizer. That motion drew the Examiner's attention to Minieri's disclosures that tetracycline as well as chlortetracycline was produced in S. aureofaciens fermentations which, as will be seen, was the basis for his rejection of Pfizer's application on the ground of inherent co-production by Duggar and Niedercorn. Any conspiracy to confer a patent on Pfizer, as alleged by plaintiff, would have demanded that the Examiner not be thus led to focus on Minieri's disclosures.

Bristol sought delay, moving for an extension of time to file preliminary statements and to postpone hearings on the motions. Pfizer's attorneys and Edelblute separately opposed those motions. Undue delay was against Cyanamid's interests. It was shifting from Aureomycin to tetracycline as its principal product, and

with every day it became less and less possible to shift back, as might be necessary if Bristol should obtain a patent on tetracycline hydrochloride and refuse to license Cyanamid. Prompt determination of the identity of the patentee was thus more important to Cyanamid than any acceleration of the commencement of its payment of royalties. Further, Edelblute as a patent lawyer thought that Bristol was improperly trying to delay issuance of a patent and that it was important to Cyanamid that the patent position be clarified as soon as possible. consequently, he argued that delay might deprive an inventor of his proper patent reward, which he thought might appeal to Examiner Lidoff.

There were no discussions or consultations between Pfizer and Cyanamid as to positions to be taken by either.

The Examiner's October 14, 1954 Decision on Motions and Dissolution of the Interference

54. Examiner Lidoff decided the motions by his decision of October 14, 1954. He first granted the Pfizer and Cyanamid motions against Bristol alleging inadequate disclosure of the Bristol organism and failure to deposit it, but at the same time denied Pfizer's similar motion against Cyanamid, pointing out that Minieri disclosed the production of tetracycline by known S. aureofaciens organisms such as that of Duggar.

Having thus noted Minieri's disclosure, Lidoff proceeded to deny the Cyanamid and Bristol motions to bring in process claims, pointing out that Duggar ahd disclosed the fact that S. aureofaciens imparted antibiotic activity to a broth, and reasoning that in view of Minieri's disclosure it could not be stated that this

activity was not due partly to tetracycline.

Then Lidoff, on his own motion, dissolved the interference as to all parties. His decision stated that tetracycline was unpatentable over Duggar and Niedercorn because Minieri disclosed, "in an application available to all the parties," that tetracycline as well as chlortetracycline was produced in a fermentation process of the kind disclosed by Duggar and Niedercorn and employing the Duggar species. Since Lidoff also held that tetracycline hydrochloride was not patentably distinct from tetracycline, the subject matter of the interference was not patentable to anyone. This decision could not have been arrived at if Cyanamid had not brought the Minieri application into the interference and thus made it "available to all the parties."

F. CYANAMID'S GOOD FAITH IN DEALING WITH THE PATENT OFFICE WITH RESPECT TO FACTS AS TO CO-PRODUCTION

The Edelblute-Lidoff Conference of November 16, 1953 and the Edelblute Statement of December 4, 1953

55. During the fall of 1953 (more than one year prior to the issuance of the Conover tetracycline patent to Pfizer), Cyanamid had pending in the Patent Office the Boothe-Morton application, the Martin-Bohonos application, the Doershuk-Bitler application, and (after December 1, 1953) the Minieri application. The Martin-Bohonos, Minieri and Doershuk-Bitler applications on their face disclosed the co-production of high ratios of tetracycline with chlortetracycline in fermentation broths using strains of Duggar's species of microorganism, S. aureofaciens.

56. On November 16, 1953, Edelblute, Cyanamid's patent attorney, met with Examiner Lidoff to discuss an amendment and affidavit Edelblute proposed to file in the Boothe-Morton application to "swear back of" the Stephens article, i.e., furnish affidavit proof showing completion of the invention of tetracycline prior to the date of that 1952 publication. At the conclusion of that interview, Lidoff informally asked Edelblute whether "strains of S. aureofaciens employed by [Cyanamid] in the production of Aureomycin might have produced quantities of tetracycline". Edelblute replied he did not know but would try to find out.

57. Edelblute thought Lidoff's inquiry was whether substantial amounts of tetracycline had been produced in Cyanamid's commercial Aureomycin operations, reasoning that Lidoff might

have thought it possible that sufficient unrecognized tetracycline had been in Aureomycin to give it the same utility as pure tetracycline, which might have made tetracycline unpatentable. Edelblute knew that tetracycline fermentation process applications (e.g., Martin-Bohonos) then pending before Lidoff disclosed that strains of S. aureofaciens produced substantial amounts of tetracycline together with chlortetracycline under the general conditions taught by Duggar.

58. On December 4, 1953, Edelblute filed the supplemental Boothe-Morton affidavit "swearing back" of the Stephens article, with remarks explaining the affidavit and summarizing the November 16th interview. In his remarks, Edelblute referred to Lidoff's inquiry whether Cyanamid might have produced quantities of tetracycline in its Aureomycin operations.

He stated that "in the laboratory of the applicant's assignee [Cyanamid], the presence of tetracycline in the fermentation liquor or in the Aureomycin products that have been made and sold by them, has not been demonstrated." He then referred to tests of fermentation liquors several years before and to recent tests of Aureomycin produced several years earlier in which no tetracycline had been found. He concluded by saying that it appeared there had "not been any tetracycline produced" by Cyanamid or Boothe and Morton, in their operations, except by the deschlorination process of Boothe-Morton or by direct fermentation processes forming the subject matter of applications of which Examiner Lidoff was aware. Included among those applications referred to by Edelblute was the Minieri application which Lidoff himself relied upon eleven months later as

disclosing that fact.

59. Those statements by Edelblute were true to the best of his knowledge and that of anyone in Cyanamid at the time they were made. They were based upon information given Edelblute by Cyanamid scientists upon his request after the November 16, 1953 interview with Lidoff and on a technical paper delivered by two Cyanamid scientists in 1950. Contemporaneous documents show that on October 12, 1953, Cyanamid scientists had analyzed Aureomycin samples and found no tetracycline. Later it was learned that in fact small amounts of tetracycline (in the range of 2%-4%) were present in commercial Aureomycin, and the Patent Office was advised of those facts by Edelblute in May 1955 in his continued and ultimately successful prosecution of the Minieri application.

60. Edelblute did not discuss with anyone from Pfizer the Examiner's November 16, 1953 inquiry concerning co-production or his answer to that inquiry. Edelblute's December 4, 1953 statement was an independent, unilateral act, which was made in good faith. Plaintiff does not contend that Edelblute's December 4, 1953 statement was false when made, but that "Cyanamid discovered later" that there had been co-production.

Lidoff Did Not Rely on Edelblute's December 4, 1953 Statement in Deciding to Allow the Tetracycline Patent to Pfizer

61. Lidoff did not rely on Edelblute's December 4, 1953 statement when one year later he decided to allow the Conover patent to Pfizer. Lidoff's dissolution of the second interference on October 14, 1954 on grounds of inherent coproduction of tetracycline shows that he could not have

placed any reliance on Edelblute's remarks of a year before. In addition, Lidoff testified that his decision to allow the Conover application was based solely on his understanding of the Tanner and Bogert affidavits submitted by Pfizer in its ex parte prosecution in the late fall of 1954. Even Lidoff's testimony is inconsistent with the notion that he might have given any consideration whatsoever to Edelblute's December 1953 statement. Lidoff testified: that he generally gave only casual consideration to statements of attorneys; that he was probably unfamiliar with the contents of most of the voluminous papers contained in the various patent application files relating to tetracycline then pending before him; that he used rejections to obtain information he wanted from applicants; that he relied on affidavits and not on informal remarks of attorneys in

deciding rejections and allowances of patent claims; and that he was quite unfamiliar with fermentation technology. Edelblute's remarks had been made in response to an informal oral inquiry from Lidoff, rather than a rejection, almost a year before Pfizer's ex parte prosectuion, and were not in an affidavit but were contained in an amendment filed in an application (Boothe-Morton) whose tetracycline product claim had been cancelled and finally rejected many months prior to the time Lidoff allowed the Conover application. Indeed, Lidoff testified with respect to Edelblute's December 1953 statement that in his view it was not very important and that he probably "would not have looked at it" because it was not a response to a rejection.

Cyanamid's State of Mind and Knowledge in Respect to Co-Production

62. Cyanamid knew prior to December 4, 1953, that tetracycline as well as chlortetracycline could be produced in fermentations with some strains of Duggar's species of organism, S. aureofaciens, either in low-chloride media or, in the case of certain strains, under Duggar's Niedercorn's precise media and conditions. Cyanamid filed and prosecuted patent applications disclosing these very facts and claiming processes for so producing tetracycline. However, prior to December 4, 1953, on the basis of certain tests by its scientists, Cyanamid believed that its Aureomycin broths and its retained samples of commercial Aureomycin contained no tetracycline. At some time after the first part of December 1953, however, some Cyanamid laboratory scientists did become aware that tests indicated qualitatively

that old samples of Aureomycin contained small percentages of tetracycline.

63. Mr. Edelblute, the attorney handling Cyanamid's tetracycline patent applications and having the responsibility of communicating with the Patent Office, did not learn of the presence of small percentage of tetracycline in commercial Aureomycin until December, 1954. Cyanamid's chief counsel, its chairman of the Patent Committee and its management did not learn of these facts until about that time or later. While some scientists at Cyanamid did become aware of the presence of small percentages of tetracycline in commercial Aureomycin months before Edelblute learned of these facts, there is no evidence that Edelblute deliberately closed his eyes to such scientific information. Just prior to his December 4, 1953 statement filed in the Boothe-Horton

application, Edelblute made inquiry of Cyanamid scientists whether tetracycline was present in Aureomycin and was advised that none was. From that time to the dissolution of the second interference, Edelblute had no reason to make further inquiries. None of Lidoff's actions during this time indicated that he thought the presence of small percentages of tetracycline in Aureomycin might be relevant to tetracycline product claims. When Edelblute learned in October 1954 from the decision dissovling the second interference that Lidoff was rejecting product claims on the ground of apprent co-production of tetracycline in teh Duggar and Niedercorn processes, he immediately requested Cyanamid scientists to investigate the factual basis for Lidoff's ruling even though he believed the decision to be erroneous in law. Tests were

thereafter conducted which showed the presence of small percentages of tetracycline in commercial Aureomycin and these results were reported to Edelblute in December 1954.

64. By that time, the Pfizer Conover application had returned to separate and secret ex parte prosecution as to which Edelblute had no standing or even knowledge of the proceedings. Edelblute's only standing at the time was in prosecuting Cyanamid's own applications; and he disclosed the facts about co-production which had come to his attention in December 1954 in the first papers he filed with the Patent Office after the facts were obtained. That disclosure was made in a paper filed by Edelblute in May 1955 in prosecuting the fermentation process claims in Cyanamid's Minieri application, to which Edelblute thought the information was

material. Edelblute did not think it was material to the patentability of the product tetracycline, and he believed that Lidoff also thought that only large amounts or proportions of tetracycline would be material to product claims.

65. Cyanamid acted in good faith and did not intentionally or knowingly misrepresent or withhold material information from the Patent Office. Cyanamid's patent attorney Edelblute did not believe that Examiner Lidoff was interested in whether any identifiable tetracycline was present in the prior art Duggar and Niedercorn fermentation broths or in commercial Aureomycin. Edelblute believed that only substantial amounts or proportions would be material to the patentability of tetracycline product claims, and he thought Lidoff also had the same view. In any event, Edelblute's

understanding of the materiality of facts as to co-production, were reasonable and honestly held. The evidence in the record shows that other patent lawyers arrived at conclusions similar to Edelblute's, on the basis of what Lidoff wrote and the various actions he took in light of patent law and practice.

In addition, Cyanamid's actions were inconsistent with an intent to deceive the Patent Office as to the facts of co-production. Cyanamid's motion in the second interference to bring the Minieri fermentation process claims into interference served to draw Lidoff's attention to Minieri's disclosure that strains of S. aureofaciens concomitantly produced quantities of tetracycline and chlortetracycline. And within a few months after the issuance of the Conover patent, Edelblute disclosed that reinvestigation of

old Aureomycin samples had shown the presence of small percentages of tetracycline.

Cyanamid's Lack of Knowledge of, or Involvement with, Pfizer's Ex Parte Prosecution and Experiments

66. Patent Examiner Lidoff allowed the Conover patent to Pfizer after Pfizer in ex parte prosecution of the Conover application in the late fall of 1954 had submitted affidavit proof which Mr. Lidoff then considered to be sufficient to overcome his prior co-production rejection. Cyanamid, however, was not involved in any way with that ex parte prosecution. Cyanamid did not know what was going on in the Patent Office between Pfizer's attorneys and the Examiner after the dissolution of the interference on October 14, 1954. Edelblute thereafter had no access to Pfizer's Conover file. He was

instructed by his superior not to communicate with Pfizer's attorneys and he did not do so. Cyanamid first learned what occurred in that prosecution, and then only to the extent revealed in the Conover patent file, when Edelblute went to Washington to read the file upon its becoming public after issuance of the patent.

G. CYANAMID'S POSITION UPON ISSUANCE OF PFIZER'S CONOVER PATENT

Views as to Validity of the Patent

67. On January 11, 1955, the Conover patent issued. Upon learning of the issuance, Cyanamid's management was surprised and disappointed because Cyanamid's Duggar patent would not longer control tetracycline and because Cyanamid would now have to pay Pfizer substantial royalties. Dr. Malcolm accordingly

requested Edelblute to examine the Conover file and give his opinion as to the patent's validity. Edelblute promptly went to the Patent Office and examined the Conover file, whcih had now become public.

Having examined the file, Edelblute came to the conclusion that the Conover patent would most probably be upheld as valid and enforceable. Edelblute, who knew by this time that small percentages of tetracycline had been present in retained samples of Aureomycin, noted that Conover had not denied that small amounts of tetracycline were present in the fermentation broths which Pfizer had prepared, and that the Examiner had not apprently been of the view that this would prevent the issuance of the patent. Edelblute had always believed that tetracycline, as a new and useful product, was patentable. Edelblute's views as to

the validity and enforceability of the Pfizer patent were in accord with other patent lawyers who have examined the matter. Edelblute conveyed his opinion as to the probable validity and enforceability of the Conover patent to Mr. Fiske, Dr. Malcolm and others in Cyanamid's management, and he recorded it in a contemporaneous memorandum addressed to various management personnel in which he set forth his observations and conclusions. Cyanamid's management relied on Edelblute's opinion.

Cyanamid's Acceptance of a License from Pfizer

68. Immediately upon the issuance of the tetracycline patent, the license agreement from Pfizer to Cyanamid became effective. Cyanamid was then a licensee subject to the then established legal principles governing patent licensees,

including the then existing doctrine that a licensee is estopped to deny the validity of the licensed patent. In any event, Cyanamid's management believed, on the advice of its patent counsel Edelblute, that the patent was valid and enforceable. Cyanamid had no evidence of fraud by Pfizer and required a license under all or some of the patent's claims in order to continue to manufacture its commercial tetracycline products.

H. CYANAMID'S PATENT INFRINGEMENT LITIGATION AND SETTLEMENT WITH BRISTOL

The Malcolm-Schwartz Meeting in the Fall of 1953

69. In the fall of 1953, Schwartz of Bristol called on Dr. Malcolm of Cyanamid, and told him that Bristol had a patent application containing claims to the product tetracycline and to a direct fermentation process. He asserted that the

process would not infringe Cyanamid's Duggar patent because it produced no chlortetracycline and used an organism of a different species from Duggar's, called by Bristol Streptomyces viridifaciens. He suggested, however, that Cyanamid and Bristol enter into a crosslicensing arrangement for the licensing of any tetracycline patents either might receive. Malcolm did not believe tetracycline could be made without infringement of the Duggar patent and asked Schwartz to give him a sample of Bristol's culture and fermentation broth, so that it could be examined to see whether the Duggar patent was infringed. Schwartz refused to do so and did not offer to pay a royalty under the Duggar patent. Malcolm responded that Cyanamid was not interested in Schwartz' proposal. Malcolm did not discuss with anyone in Pfizer the question whether

Cyanamid should or should not enter into an agreement such as Schwartz proposed.

Institution of the Infringement Suit

70. In May 1954, Bristol began to market tetracycline under the trade name "Polycycline". On September 29, 1954, Cyanamid sued Bristol for infringement of the Duggar patent. cyanamid had considered and attempted to get evidence for such a suit for several months. Cyanamid's decision to sue Bristol was made independently by its management and was not the result of any discussions or agreement with Pfizer.

Settlement of the Suit

71. About two months after the suit was brought, Schwartz initiated settlement talks with Malcolm. Malcolm again

suggested to Schwartz, as he had in 1953, that Bristol permit Cyanamid to inspect Bristol's tetracycline-producing organism and fermentation beer, which would determine whether the Duggar patent was being infringed, and he offered Bristol a royalty- bearing license if it was infringed. This time Schwartz agreed.

Malcolm was now willing to license Bristol because it appeared that litigation would be protracted and expensive, and Bristol was now willing to permit inspection of its culture and beer on the understanding that it would pay a royalty if infringement were found. Agreement in principle on terms of a license was reached in the first part of December 1954. Inspection of Bristol's organism and beer in late December 1954 showed that Duggar was infringed. On January 13, 1955, formal written agreements were executed. The

settlement agreement provided for a non-exclusive license to Bristol and is a full and accurate reflection of the entire understanding between the Companies. Cyanamid's settlement with Bristol took place about one year prior to the time plaintiff contends Cyanamid entered into conspiracy with Bristol.

72. At the time agreement in principle with Bristol was reached, Cyanamid management thought it likely that Bristol would need no license to make tetracycline other than a license under the Duggar patent, since Examiner Lidoff had dissolved the second interference in October 1954 on the ground that tetracycline was not patentable, and Cyanamid's management had been advised at that time that a patent on tetracycline probably would not be issued to Pfizer for a long time, if ever.

Bristol conceded that it was infringing

the Duggar patent and that the strain used by it was S. aureofaciens or so closely related as to be its legal equivalent. Cyanamid licensed Bristol non-exclusively to make, use and sell products containing tetracycline and not more than 6% chlortetracycline, for a royalty of 5% of Bristol's net sales of such products. The license did not in any way limit Bristol's right to sell its products in finished form or in bulk to any number of purchasers.

Cyanamid's decision to settle its infringement action and license Bristol was made independently and unilaterally and was not the result of any discussions or agreement with Pfizer. At the time Cyanamid and Bristol reached agreement on settlement, Cyanamid had no knowledge of Pfizer's ex parte prosecution of the Conover application and the issuance of a notice of allowance. Cyanarid first

learned of the issuance of the Conover patent to Pfizer on January 11, 1955, the day teh patent was issued.

PART FOUR

PROPOSED FINDINGS RELATING TO THE ALLEGED FIVE PARTY CONSPIRACY TO EXCLUDE COMPETITORS AND MONOPOLIZE

Absence of Any Cyanamid Involvement in the Pfizer-Bristol-Squibb-Upjohn Infringement Litigation or its Settlement

73. On January 11, 1955, the day the Conover patent issued, Pfizer sued Bristol, Squibb and Upjohn for infringement. Bristol, Squibb and Upjohn later sued Pfizer for declaratory judgment. In the winter of 1955-1956, that litigation was settled and Pfizer licensed Bristol, Squibb and Upjohn. Cyanamid had nothing to do with the institution, prosecution or settlement of those actions or with the

licenses granted by Pfizer to Bristol, Squibb and Upjohn.

During the Pfizer infringement litigation in |955, Bristol, Squibb and Upjohn undertook discovery to develop facts for their defenses. Cyanamid had nothing to do with those proceedings, except that it furnished documents from its files and information impartially to both sides.

74. There is no evidence that in or around the winter of |955-|956, or at any other time, Cyanamid entered into any conspiracy, agreement or understanding with Bristol, Squibb, Upjohn and Pfizer to exclude competitors and monopolize. All evidence is to the contrary.

PART FIVE

PROPOSED FINDINGS AS TO THE ALLEGED PRICE FIXING CONSPIRACY (PRICING AND MARKETING DURING THE |953-|966 PERIOD)

A. CYANAMID'S LEADING POSITION IN MARKET

75. Cyanamid was the leading seller of braod spectrum antibiotics. In every year from |954 to |966, Cyanamid obtained the largest dollar volume of sales of any seller of broad spectrum antibiotics. The second leading seller during that time was Parke, Davis.

B. PRICING AUTHORITY

76. Dr. Malcolm and Lyman Duncan were the only persons at Cyanamid during the relevant period with authority to establish or to change any of the prices at which Cyanamid sold its pharmaceutical products. Dr. Malcolm, who was Lederle General Manager up to |955, established the introductory prices on Aureomycin in |948,

on Achromycin in 1953, and established the pricing policy which Lederle followed. When Lyman Duncan succeeded Malcolm as General Manager of Lederle in 1955, he had the responsibility and authority for marketing and pricing Lederle's products. Duncan had such responsibility from March 1955 to July 1967.

C. PRICING AS A COMPETITIVE FACTOR IN THE PRESCRIPTION MARKET

The Controlling Effect of the Prescription Factor

77. As set forth in Proposed Finding No. 13 supra, antibiotics are prescription drugs and are obtainable only upon the prescription or order of a physician. Because of the prescription factor, the physician, in effect, was the customer, and physicians determined which drugs consumers would purchase and in what amounts. During the 1950's and into the early 1960's,

almost all prescriptions were by manufacturer's brand name (e.g., "Achromycin") rather than a generic name ("tetracycline"). By law and by custom, when a prescription is for a particular brand, the pharmacist must dispense the brand prescribed. As a consequence, physician preference was the most important factor in attempting to gain sales.

Influence of Price Upon Demand in the Prescription Market

78. Prescribing physicians, at least during the period up to the early 1960's, were not generally influenced by the price (i.e., cost to patient) of a drug, but rather tended to specify whatever drug was regarded as superior, regardless of price. To doctors, the overriding consideration in making prescribing decisions was the patient's health and rapid cure from disease. Doctors relied upon their

experience and familiarity with the brands of drugs and the reputation and reliability of the manufacturers. As compared with these factors, price was not as great a force in the prescription drug market as it may be in markets for other types of products.

79. During the 1950's and up through the mid-1960's when new uses for tetracycline were developed, the overall market demand for broad spectrum antibiotics was largely inelastic--i.e., its size depended upon the incidence of disease, and the quantity of an antibiotic prescribed (and hence purchases) would not have been significantly affected by changes in price levels except of the most substantial magnitude.

Competitive Intelligence and Belief that Price Reductions Were Self-Defeating

80. Cyanamid and other sellers, through their respective sales forces and customers, kept a close watch on competitive pricing, and pricing information was immediately and readily available from such sources. Under these circumstances, it was to be expected that any price reduction by one would quickly be met by all. Such had been the experience with the price reductions of 1949-1951.

As a consequence, it was the belief of Cyanamid's management, and of others, that any price reduction would normally be self-defeating since it would be met almost immediately by equal reductions in the prices of competitive brands without effectuating any increase in the size of the total market or in Cyanamid's share of that market.

Oligopoly Market Structure

81. During the relevant period, there were only a few manufactureres and sellers of broad spectrum antibiotics, and defendants and Parke, Davis accounted for substantially all of the sales. In terms of economic analysis, an industry with such a structure is included in the theoretical model for oligopoly, and in such an industry uniformity and stability of prices is a common characteristic.

Thrust of Competitive Initiatives

82. Of the methods of competitive initiatives available to pharmaceutical manufacturers to obtain sales advantages, the ones most heavily relied upon were: (a) development of new and different products and product forms; (b) development of reputation with physicians for high standards of quality and reliability, and (c) promotion to physicians

of brand names and product differences.

83. Because of the nature and characteristics of the market, Cyanamid generally relied on competitive initiatives other than price moves. Cyanamid's policies and programs were aimed at development of a long term competitive advantage with distinctive and outstanding products and a favorable position with the medical community. To that end, Cyanamid directed its efforts toward research and development of new and improved products, development of a firm reputation with the medical profession for reliability and superior standards, and extensive promotion to the medical profession of its name and the names of its brands of pharmaceuticals. Cyanamid tried to gain physicians' prescriptions by bringing to their attention the therapeutic worth of Lederle's products and thus persuade them

to specify Lederle brands. This was done primarily through a large force of "detailmen" (about 600-800), who called upon physicians, and by means of advertising and sampling.

Uniformity and Stability of Prices

84. The necessary tendency of these factors (proposed findings 77-82) was towards substantial uniformity and stability of prices to the prescription market. Price uniformity and stability is a common characteristic of the pharmaceutical industry and of concentrated oligopoly industries.

D. CYANAMID'S BASIC PRICING POLICY

85. As set forth in Proposed Findings Nos. 30-31 supra, Cyanamid's basic pricing policy was established by Dr. Malcolm long prior to the introduction of Achromycin in

November 1953 and was based upon Cyanamid's experience with the four price reductions during the 1949-1951 period. The same pricing policy was followed during the period when Lyman Duncan was the General Manager of, and then Vice-President in charge of, Cyanamid's Lederle Division. Cyanamid's management independently concluded that it would be unlikely to achieve any competitive advantage by initiating price reductions because any such reductions would probably be met almost immediately by competitors. It was also the judgment of Cyanamid's management that a general price reduction would not increase usage of the drug or its sales, but would simply lead to lower revenue. Therefore, while Cyanamid felt free at all times to reduce its prices, its management concluded that the best policy consistent with its income objectives was to continue

existing prices except where reductions might be necessary to meet competition or where reductions might be expected to achieve a competitive advantage.

86. Cyanamid followed that basic pricing policy in the years prior to November 1953 (when no conspiracy is alleged), and it followed the same policy in the period after November 1953 (when Cyanamid is alleged to have acted pursuant to conspiracy).

E. CYANAMID'S PRICING DURING 1953-1960 PERIOD

92. During the period from October 1951 to August 1960, Cyanamid made no general price reductions on its broad spectrum antibiotic products. During this time, none of Cyanamid's competitors -- including its closest competitor, Parke, Davis -- initiated any price reductions.

From time to time in the government markets, Cyanamid and its competitors did make price reductions. However, in the large prescription market where Cyanamid directed most of its selling efforts, experience had shown that no competitive advantage could be gained by price reductions. Physicians continued to prescribe Cyanamid's brands, and it continued to be the leader, by far, in broad spectrum antibiotic sales. Its overall market policies had proven successful. The net income objectives for its Lederle division were being achieved. Although continually reassessing its position in the market and considering whether changes in price might be advantageous or warranted in view of developments taking place, Cyanamid's management independently concluded that there were no sound business reasons during

that time for initiating a general price reduction.

Cyanamid's Competitive Initiatives in Marketing and Pricing Achromycin and Declomycin

93. During this period, Cyanamid undertook two very important initiatives which afforded it a substantial competitive advantage in the marketplace. Those were the development and introduction of Achromycin (1953) and Declomycin (1959).

94. Cyanamid introduced tetracycline on the market on November 16, 1953, under its trade name Achromycin. Cyanamid's management believed that it would have been justified in introducing Achromycin at a price higher than that then prevailing for Aureomycin, Terramycin, and Chloromycetin, since Achromycin was believed to be a substantially superior product, was more costly to produce than Aureomycin and

required very large promotional and advertising expenditures to support its introduction. It was decided, however, without any consultation or understanding with any competitor, that Achromycin would be introduced at the prices then prevailing for the existing broad spectrums. In view of the importance of Achromycin to Cyanamid, the enormous business risk involved in its introduction, and its similarity in terms of anti-bacterial spectrum to Aureomycin, Terramycin and Chloromycetin, such an introductory price level was thought to be necessary in order to eliminate any possible price barriet to market acceptance of the new drug. Furthermore, Cyanamid's management believed that it had a powerful competitive weapon in a superior product which would be available at the same price as existing broad spectrums.

Cyanamid launched Achromycin with a crash promotional campaign by its sales force, including the mailing of 17 million pieces of promotional material. As a result "Achromycin" promptly became synonymous with "tetracycline" to the medical profession. Although Pfizer, Bristol, Squibb and Upjohn later came on the market with tetracycline products similar to Cyanamid's Achromycin, Cyanamid, by virtue of its lead time, the prompt acceptance by physicians of the Achromycin brand, and continued promotion, achieved and long maintained the leading position with physicians.

95. In September 1959, Cyanamid introduced its new superior broad spectrum antibiotic Declomycin on the market. It again followed somewhat the same strategy which had proven so successful with the introduction of Achromycin six years

earlier. It introduced the new drug Declomycin at the same levels then existing on Achromycin, Chloromycetin, Terramycin, Tetracyn and other brands of tetracycline on the market. Declomycin promptly became one of the largest selling of all broad spectrum antibiotics on the market.

Competitive Initiatives by Others

96. Bristol, Pfizer, Squibb and Upjohn made significant competitive initiatives during the 1955-1960 period by the development and extensive promotion to physicians of branded specialty products. Bristol came out in 1956 with a tetracycline phosphate complex which it sold under the name Tetrex. After its introduction, about 80% to 90% of Bristol's sales were of Tetrex. Squibb in 1955 came out with "Mysteclin," a combination of tetracycline and nystatin, which soon

accounted for over 80% of Squibb's sales. In 1957, Upjohn came out with "Panalba" a combination of tetracycline and novabiocin; thereafter about 90% of Upjohn's sales were of that specialty product. As a result of these competitive initiatives, each of Bristol, Squibb and Upjohn gained substantial sales in the market. The sales gained by these companies on their specialty products were not made on a price basis. Mysteclin and Panalba were priced substantially higher than Achromycin and Tetrex was priced at the same level as Achromycin. Cyanamid's management did not believe it could effectively counter this competition by price reductions, but rather by development and promotion of its own specialty products. In response to Tetrex, Cyanamid introduced Achromycin V, and in response to Mysteclin, Cyanamid introduced Achrostatin. In 1959, Pfizer introduced a

new injectable form of Terramycin which it extensively promoted to give it a significant competitive advantage in selling all forms of Terramycin.

F. THE "HOSPITAL MARKET"

97. Although the prescription factor was sometimes of less importance where a hospital operated on the formulary system, the physician had a somewhat similar influence on drug demands of hospitals and institutions. Physician designation was a criterion followed in North Carolina in selecting the suppliers from whom hospitals and institutions would solicit bids or quotations and from whom they purchased braod spectrum antibiotics.

98. Cyanamid's marketing and pricing strategies relating to customers in the hospital market were influenced by a number of competitive and economic factors, not

present in the prescription market. While there were differences among types of hospital customers, some factors were generally common to all:

(a) Brand specification by physicians was not as important as in the prescription market. Many hospitals operated under a "formulary system" which permitted the hospital pharmacist to substitute the brand of tetracycline stock for that prescribed. As a result, a hospital customer was apt to be principally interested in price and, unlike the retail pharmacist, was able to generate price concessions by a seller by threatening to switch from one brand to another.

(b) Drug procurements were often made through professional purchasing agents whose primary concern was to buy cheaply.

(c) Many hospitals, because of their size and efficient inventory control,

purchased in large quantities and thus were able to exert considerable economic leverage on their suppliers.

(d) Because some hospital orders were very large and placed at infrequent intervals, price reductions could be made to individual customers on a "spot" basis with hope that competitive retaliation would not be immediate.

The Private Hospital ("NPA") Market

99. Cyanamid's published prices to private hospitals ("NPA") were the same as its prices to retailers, but the published price was generally not the effective price. Cyanamid offered reduced and varying prices to some of its private hospital customers by means of "free goods." Free goods were packages of Aureomycin or Achromycin (usually stock rather than sample packages) which were

given to a customer as part of its order, but without additional charge, as a means of reducing the effective price paid by the customer for its tetracycline purchase. The use of free goods to effect price reductions, and on products other than tetracycline, was common in the pharmaceutical industry. This method of price competition was used in this market because (a) it did not require a general price change, which would have applied not only to the relatively small volume of NPA hospitals but also to the direct retail accounts which were sold at the same published prices; (b) it could be used on an individual basis to entice large orders, and (c) it enabled sellers to confuse competition for a time as to exactly what its net prices were, and thus, temporarily, perhaps, win business from competitors. There was substantial and continuing

competition by means of free goods in the private hospital market.

The City, County and State ("CCS") Market

100. Cyanamid sold its Aureomycin and Achromycin products to CCS hospitals directly and through local wholesalers and retailers, to whom Cyanamid until 1960 made available a "handling allowance" of 10% of Cyanamid's published CCS price, plus the regular cash discount. The dealer would procure the order and notify Cyanamid, who would then ship directly to the CCS institution (a "drop shipment") and bill the wholesaler or retailer at Cyanamid's published CCS price less the 10% handling allowance and the 2% cash discount.

101. CCS purchasers were a relatively small part of Lederle's business, accounting for about 4% of its total sales and Lederle's main efforts in regard to

these customers were directed toward retaining its sales position by promoting specification of its brands with the numerous individual institutions located throughout the country, and by price initiatives on large bids of the larger CCS purchasers.

102. Cyanamid kept close track of the pricing moves of others and from time to time considered price reductions to gain competitive advantage. Cyanamid did reduce its CCS prices on several occasions, either as published price reductions or in the form of authorizations to the sales force to bid special, reduced prices, as follows:

(a) December 20, 1954.

(b) May 3, 1955.

(c) June 21, 1956.

(d) June 24, 2958.

(e) January 1, 1959.

(f) January 25, 1960.

103. The evidence in the record, including a number of tabulations of bids to CCS purchasers and contemporaneous sales reports from the field, establishes that there was substantial and continuing price competition in the CCS market by means of (a) published price reductions; (b) bids below published prices; and (c) during the period up to at least 1960, dealer bids which were encouraged and made possible by the "handling allowances" made available to retailers or wholesalers for CCS business. There was a steady downward trend in prices in the CCS market prices, with a wide variety of bids and actual prices, particularly with the larger purchasers.

The "Federal" Market

104. Various agencies of the United States Government - notably military

agencies, the Veterans Administration and the General Services Administration - purchased antibiotic products in substantial quantities, although at infrequent intervals. A wide variety of bids and offers was made to those agencies at rather steadily declining prices on both sealed bids and negotiated transactions. At the time of Cyanamid's May 1955 reduction to CCS customers, it also made a similar published price reduction in the federal market, and a second such reduction in January 1959, with additional reductions throughout the 1960's.

G. PRICING AND COMPETITION IN THE PRESCRIPTION MARKET DURING THE 1960-1966 PERIOD

The 1960-1966 Price Reductions

105. On July 30, 1960, Pfizer, which had been losing substantial amounts of sales for over two years, initiated a major

price reduction which, in substance, amounted to a 15% reduction on its tetracycline and Terramycin products to direct retailers and private hospitals. This was the first general price reduction in almost nine years and was followed by a series of subsequent price reductions and somewhat differing pricing practices in response to changing market conditions.

Cyanamid met the Pfizer 1960 reduction almost immediately with similar reductions. Upjohn, Squibb and Bristol also reduced their prices. Parke, Davis, however, did not.

106. On June 14, 1962, Cyanamid initiated a general price reduction of about 15% to $22.00 on 250 mg. capsules, 100's on its Achromycin, Declomycin and Aureomycin products. Cyanamid's reduction was promptly met by Pfizer, Upjohn, and Squibb and Bristol. However, Parke, Davis,

again did not follow but continued to adhere to the pre-1960 price levels.

107. On May 22, 1964, Pfizer reduced its prices on oral forms (capsules, tablets and syrups) of tetracycline by a further 20% (to $17.60 on 250 mg. capsules, 100's). It also reduced prices of oral dosages of Terramycin, but only by 10% (to $19.80 on 250 mg. capsules, 100's). Prices on Pfizer's combination products and on intramuscular and intravenous injectable dosages were not changed. On May 26, Cyanamid met Pfizer's reduction on oral forms of its Achromycin and Aureomycin products but did not change its Declomycin prices. Upjohn and Bristol also made 20% reductions on oral dosages, excluding combination products. Squibb reduced its Sumycin oral products by only about 10% but reduced its Steclin products by 20%. Numerous products in the lines of each

manufacturer were unaffected by this change. Parke, Davis, again, did not change its prices.

108. On April 1, 1966, Cyanamid initiated another price reduction; this time a general 15% on major oral forms (capsules, tablets, syrups), and a 10% reduction on certain specialty products. This brought Declomycin 150mg. capsules 100's to $18.70 and Achromycin 250 mg. capsules 100's down to $14.96. The responses of Pfizer, Upjohn, Squibb and Bristol were mixed, varying in time and on various specialty products and dosage forms. Parke, Davis, again, continued to adhere to the same prices it had been charging since October of 1951.

The Changed Market Conditions of the 1960's Which Had an Impact on Pricing and Marketing Decisions

109. The changing pricing patterns of

the 1960's were the result of new and changing market circumstances, and the pricing initiatives made by Cyanamid during the period were the result of its management's assessment of, and reaction to, those changing conditions. Among the more important of the new circumstances were:

(a) Tetracycline was a maturing product by 1960, and was being replaced for many uses by new antibiotics. Cyanamid's management had long calculated that the optimum economic life of a drug was not much more than five years, and tetracycline was six years old in 1960.

(b) The late 1950's and 1960's witnessed the introduction and market acceptance of a number of new and improved medium and wide spectrum antibiotics. Very substantial competitive inroads against tetracycline were being made by such large

pharmaceutical houses as Lilly, Abbott and Wyeth in promoting new and improved antibiotics, including new forms of erythromycin and synthetic and semi-synthetic penicillins. During the 1960's Lilly became one of the leading sellers in the market by extensive promotion of its brands of antibiotic products.

(c) Cyanamid and other manufacturers became increasingly sensitive to the poor public image of the pharmaceutical industry following the widely publicized Kefauver drug hearings in 1959-1960. While Cyanamid officials believed the attacks on the industry were extremely unfair, they became an importnat factor in the marketplace, as the medical profession, public authorities and the public became increasingly more sensitive to costs of medical care and prices on drugs.

(d) In the 1960's there developed a trend toward generic prescribing by physicians. In the 1950's, less than 1% of tetracycline prescriptions were written generically; during the late 1960's this rose substantially. Generic prescribing tended to offset the efforts of Cyanamid and other manufacturers to differentiate their products, and thus put greater emphasis on the use of price as a competitive strategy.

(e) While it had been firmly believed, and experience during the 1940's and 1950's had demonstrated, that market demand was limited by the incidence of disease, during the latter part of the 1960's it appears that demand could be increased by lower price levels and devlopment of new uses for tetracycline. For example, long-term treatment of acne was found to be a new use, which could be exploited, where price

(not quality) was an influential factor in physicians' prescribing decisions.

(f) Tetracycline ran into problems with tooth staining and with organisms becoming resistant to it, which led physicians to prescribe other antibiotics.

110. Cyanamid's pricing decisions throughout the 1960-1966 period, as during the years 1953-1960, were the result of its management's independent assessment of market and competitive conditions, and other changing circumstances under which the products were sold.

H. ABSENCE OF ANY AGREEMENT OR UNDERSTANDING AS TO PRICES

111. Cyanamid's management at all times priced Cyanamid's broad spectrum antibiotic products independently and unilaterally and did not at any time engage in any conspiracy, agreement or understanding with

Pfizer, Bristol, Squibb or Upjohn, or anyone else, as to prices. While in the voluminous documentary evidence in the record there are a very few isolated items which plaintiff contends are probative of the alleged conspiracy, these fragmentary pieces of evidence were fully explained by the persons involved and do not support any inference of unlawful price fixing by Cyanamid.

I. TRADE CLASSIFICATIONS AND DISCOUNTS

||2. The trade classifications, and the discount structure based on those classifications, which Cyanamid used in its sales to various purchasers of its Aureomycin and Achromycin products were classifications used by it since at least 1938, well before the introduction of Aureomycin or Achromycin. Those classifications were used for Cyanamid's

other products, not just for antibiotics and were common in the industry. Parke, Davis, not alleged to have been a co-conspirator, used similar trade classifications and discount structure in selling its Chloromycetin from the date of its introduction in 1949 throughout the period in suit.

||3. Cyanamid independently and unilaterally classified its customer hospitals as being "city, county, state" hospitals, "private, non-profit" hospitals, or "federal" hospitals, based on ownership and operation of the hospital. The classification of hospitals pre-dated the advent of broad spectrum antibiotics, and the method of classifications was traditional in the pharmaceutical industry. Most hospitals were easily classified since their status was readily apparent and posed no problem for Cyanamid. In resolving

uncertainties as to the ownership of a particular hospital, Cyanamid generally made reference to a trade publication selected because of its extensive coverage. Bristol also relied exclusively upon the same director, but others of the defendants followed different published guides.

114. Cyanamid did not discuss the classification of any hospital with any competitor and the record does not show that it ever reclassified a hospital with the result that the hospital paid higher prices than it previously had paid.

J. DOSAGE FORMS AND PACKAGE SIZES

115. Cyanamid offered its Aureomycin and Achromycin products in a wide variety of dosage forms and package sizes, many of which were not offered by other sellers. Several of the more commercially successful forms sold by defendants were similar or

produced similar results. However, Cyanamid's selection of dosage forms and package sizes was determined by legitimate medical and commercial considerations, including need and effectiveness, convenience, and ease of handling and administration. The medical testimony in the record shows that common forms and dose amounts are desirable for ease of administration and physician convenience as well.

Most of the dosage forms and package sizes in which Cyanamid sold its Aureomycin and Achromycin products during the period in suit had first been introduced by Cyanamid prior to any alleged conspiracy in November 1953. Parke, Davis, not alleged to have been a co-conspirator, marketed many of these same forms beginning in 1949. There is no evidence that Cyanamid ever discussed the subject of dosage forms or

package sizes with any other defendant.

K. CONCLUSIONARY FINDINGS ON MARKETING AND PRICING

116. Cyanamid, at all times, marketed and priced its Aureomycin and Achromycin broad spectrum antibiotic products independently and unilaterally, and did not enter into any conspiracy, agreement or understanding, express or implied, with any of its competitors as to prices, dosage forms or customer classifications.

117. There was continuous and substantial competition between Cyanamid and other suppliers of antibiotics throughout the relevant period, and that competition extended to pricing initiatives where, and when, such moves could effectively be employed to gain competitive advantage in the market.

118. To the extent there was uniformity

or stability on prices, it was the result of normal economic and competitive forces in the markets where the products were sold.

119. The patterns of pricing behavior in the various markets during the relevant period were the natural result of independent business conduct influenced by the structure and characteristics of the market.

120. To the extent there were similarities among competing sellers in terms of dosage forms and customer classifications, they were the natural result of independent marketing decisions based upon legitimate business and medical considerations.

4. Squibb's proposed findings of fact 9-167 inclusive filed January 18, 1974.

9. Of all the combination and additive forms of tetracycline marketed by defendants, the Squibb specialty, Mysteclin, has achieved the most widespread acceptance of physicians and this, has had the greatest commercial success. In contrast with Steclin (the tetracycline hydrochloride product whcih was also marketed by each of the other respondents under their respective brand names), the sales of which by Squibb steadily declined, Mysteclin realized considerable success as soon as it became available for distribution in early 1955, and has enjoyed increasing sales since that time. Thus, Mysteclin accounted for approximately 74% of Squibb's tetracycline sales during the first year it reached the market (as opposed to 26% for Steclin), 90% of

Squibb's tetracycline sales in 1956 (as opposed to 10% for Steclin) and 86.56% of Squibb's tetracycline sales in 1957 (as opposed to 2.57% for Steclin). As a result of such dramatic sales expansion, the Squibb share of total industry tetracycline sales grew from 2% in 1954, to 9% in 1955, to 14% in 1956 and to 15% in 1957, while its share of the broad spectrum antibiotic market increased commensurately: 1% in 1954, 5% in 1955, 8% in 1956 and 10% in 1957.

Background of Squibb's Entry into the Tetracycline Market

10. (a) Squibb was one of the first companies to market the narrow spectrum antibiotics, penicillin and streptomycin, the use of which for the treatment of certain diseases declined with the introduction of the so-called broad spectrum antibiotics. By the late summer

of 1954, the medical profession had markedly altered its prescription habits in favor of the newer broad spectrum drugs. Moreover, a price war of major dimension in those products had driven profits to the point of little or no return and had even removed from the area of competitive combat a number of companies that had been manufacturers and sellers of those drugs.

(b) It became apparent, therefore, that Squibb's chance of remaining a factor in the antibiotics field depended upon its ability to market one of the broad spectrum drugs, of which tetracycline seemed to enjoy the brightest prospect for an expanding market.

11. Squibb's great interest in entering the broad spectrum market is demonstrated by the extensive research program it conducted during the course of six years (from the fall of 1948 to the

fall of 1954) seeking the discovery of a new broad spectrum antibiotic. As stated by Dr. Asger P. Langlykke, Director of the Squibb Institute for Medical Research (SX 80), such a discovery might be "well nigh essential for competitive survival in the antibiotics field". But those research efforts had proven to be unsuccessful, so that by August of 1954 Squibb was naturally receptive to an opportunity to purchase tetracycline in bulk from Bristol. Indeed, that opportunity provided the only means for the immediate realization of the Squibb desire to get into the broad spectrum market. Moreover, to have relied exclusively on the possibility that further research might have eventually uncovered what extended work over a period of six years had failed to produce would have been a decision quite open to second guessing from a business standpoint.

12. As is true of any business decision, the acceptance of the Bristol offer entailed certain risks. The possibility existed that a product patent on tetracycline might issue to a company other than Bristol. There was also a chance that Squibb, being a late entry in the market, might encounter substantial sales resistance to its plain tetracycline product. And also quite important, the high cost of bulk purchasing (as will appear shortly) portended for Squibb a relatively disadvantageous sales and profit position in the market for plain tetracycline. Countervailing considerations, however, far outweighed those risks, for in addition to Squibb's expectation of an expanding demand for tetracycline, it possessed a new antifungal agent (nystatin) which, in combination with tetracycline, would give Squibb a

differentiated product with excellent prospects for commercial success in the broad spectrum field. That product, which was first marketed in February of 1955, became known as Mysteclin.

13. Moreover, the nature of the drug industry itself formed a compelling reason for the Squibb decision to enter the broad spectrum market. With the high rate of new developments in the industry and the concomitant rate of obsolescense, failure to seize opportunities in new products can be economically disastrous. Indeed, as Mr. John J. Toohy, General Manager of Squibb, testified, "If you [stand still in the drug industry], you are dead" (Tr. 1181-81). Mysteclin was just such an opportunity. Indeed it was its confidence in the ultimate commercial success of that product that in large part underlay the Squibb decision to buy its way into the broad

spectrum market for an amount that proved to be well in excess of $1,750,000.

Mysteclin

14. (a) Mysteclin is a Squibb specialty product. It is a combination of tetracycline hydrochloride and nystatin, an antifungal antibiotic which is also sold independently under the Squibb trade name Mycostatin. Mysteclin-V is a combination of tetracycline phosphate complex and nystatin.

(b) Nystatin was discovered and patented by two doctors in the New York Board of Health laboratories and first came to Squibb's attention in 1951. Recognizing the possibilities of the new antibiotic, Squibb took a license (to make, use and sell) in 1951 from Research Corporation (the assignee of the nystatin patent) and spent three years, at a cost of more than

$1,000,000, researching and developing the product. Mycostatin was introduced along with Steclin in September of 1954. Squibb proceeded as rapidly as it could to complete the development of the new combination and finally, in February of 1955, placed Mysteclin on the market. While Squibb realized that it would be difficult to establish Steclin as a major factor in the market for plain tetracycline, it saw the advantages of the specialty combination and promoted it accordingly. Even before Mysteclin was introduced, Squibb laid the groundwork for its promotion by cautioning against monilia overgrowth (the condition for which nystatin therapy is indicated) in its Steclin advertisements. With the introduction of Mysteclin, virtually the entire promotional efforts of Squibb were concentrated on the new specialty, and

(with the exception of a limited reminder sampling program devoted to certain other products) it was detailed exclusively as soon as it was available. Squibb continued to emphasize Mysteclin and Mysteclin-V throughout the relevant period of this case, having reduced its promotional efforts with respect to plain tetracycline for that purpose.

The Bulk Purchase Contract with Bristol

15. Bristol's decision to limit its bulk sales to two purchasers seems to have been premised entirely on its independent business judgment that it could not service the requirements of more than two customers and at the same time, consistent with its desire to terminate a dependency on bulk business, develop its own label business. Indeed, Bristol had some doubts about its ability adequately to

supply even two bulk purchasers the size of Upjohn and Squibb and actually anticipated some difficulty in delivering the first orders. The record is clear that there was neither an agreement, express or implied, nor any discussions between Bristol and Squibb concerning the number of bulk customers to which Bristol would sell.

16. So far as Squibb knew (and as this record shows), Bristol's selection of Squibb as one of its bulk customers was based entirely on independent judgment dictated by sound business considerations. First, Bristol had previously enjoyed worthwhile business relations with Squibb in connection with a bulk sale exchange of penicillin and streptomycin. In the late spring of 1953, Squibb agreed to purchase bulk penicillin from Bristol in approximately the same dollar quantities as Bristol's purchases of bulk stretopmycin

from Squibb--an arrangement that had helped Bristol through a critical period in its development and, as Squibb saw it, had established Squibb in the judgment of the Bristol management as a reliable and capable firm. Secondly, Squibb possessed an aggressive sales force of more than 700 men and maintained a strong position both in the retail drug trade and in the hospital market--thus, it offered Bristol an outlet for a large portion of its bulk production capacity.

17. The first time that Squibb learned that Bristol contemplated entering the tetracycline field was shortly after the Bristol announcement, made public on November 5, 1953, that Bristol had developed a fermentation process for the production of tetracycline. At that time Squibb evinced to Bristol an interest in tetracycline and requested that Bristol

consider Squibb as a possible customer in the event that Bristol decided to sell in bulk. On its part, Bristol gave Squibb some affirmative indications and, occasionally, some general information about its ability and progress in getting into the tetracycline market. Further discussion concerning the availability to Squibb of bulk tetracycline continued to be general until August of 1954, by which time Bristol was already on the market with its own brand of tetracycline, and established the lead time that it wanted over its proposed bulk purchasers and, therefore, was in a position to make a firm offer to Squibb--which it did.

18. (a) The first agreement between Bristol and Squibb for the purchase and sale of bulk tetracycline was executed on September 1, 1954. Pursuant to that agreement Squibb undertook to buy, and

Bristol agreed to sell, 1,000 kilograms of tetracycline hydrochloride (and such other quantities to be agreed upon from time to time), for delivery on or before December 31, 1954, at an initial price of $1,000 per kilogram, it being contemplated at that time that prices would be substantially reduced in the future. Reciting such factors as the "uncertain patent situation", Bristol's establishment of tetracycline production facilities and its agreement to sell tetracycline in bulk to Squibb, the agreement granted to Bristol a release from an implied warranty of non-infringement and an indemnity from Squibb against any damages sustained as a result of its sale of tetracycline to Squibb. In addition, Bristol retained the right to determine the disposition of any claim or suit alleging infringement of any patent covering tetracycline, except that (a)

indemnification would be waived in respect of any settlement not approved by Squibb if the settlement figure exceeded an amount equal to 5% of the retail drug price of all Squibb products containing tetracycline purchased in bulk from Bristol and (b) in no event (other than Squibb's failure to continue pruchasing its tetracycline requirements from Bristol) could Bristol participate in any settlement which precluded it from selling tetracycline to Squibb

(b) On September 2, 1954, Squibb offered to buy, and Bristol agreed to sell, an additional 1,500 kilograms of tetracycline hydrochloride at a price of $500 per kilogram, subject to the conditions of the initial purchase agreement.

19. The high initial bulk price and the indemnification feature of the

contract were matters of negotiation between the parties. Bristol demanded an initial price of $1,000 per kilogram because of the economic necessity of recouping, as quickly as possible, at least a part of the large expenditure that it had made in researching and developing the product. Similarly, Bristol insisted that Squibb bear its share of the patent risks, that both companies recognized to exist, because Bristol was financially unable to proceed without such indemnification. Since Squibb had strong business reasons for entering the tetracycline market, and since the Bristol offer constituted the only available route, Squibb acceded to both provisions with the understanding that the price on the next order would be $500 a kilogram and that future bulk prices would be further reduced as Bristol was able to effect economies in production. In fact,

the price that Bristol charged Squibb for bulk tetracycline hydrochloride was decreased to $400 a kilogram in December of 1954 and to $350 a kilogram in July of 1955, with a further reduced per kilogram price resulting from advertising allowances and the like. Bristol made further reductions in the price it charged Squibb for bulk tetracycline as a part of the annual renewal of the supply agreement between the companies; by 1964, the price had decreased to $131 a kilogram.

20. The record is clear that the bulk purchase agreement between Bristol and Squibb was negotiated by each company at arm's length and was entered into by each company for legitimate and compelling business reasons. The record is also clear that there was neither an agreement nor any discussion between Bristol and Squibb with respect to resale prices of tetracycline

products or in respect of any subject matter of that nature. Moreover, there is absolutely no evidence in the record of any contact, conspiratorial or otherwise, between Squibb and any other defendant prior to, or at the time of, the execution of the Bristol-Squibb purchase agreement.

THE PATENT CASE AGAINST SQUIBB

The Pfizer complaint in the infringement litigation

21. On January 11, 1955, Pfizer instituted an action against Squibb in the United States District Court for the Northern District of Georgia (Atlanta Division), charging Squibb with infringement of the Conover patent (United States Letters Patent No. 2,699,054) which had issued to Pfizer that day. In its complaint Pfizer alleged that Squibb was infringing the Conover patent by selling tetracycline and claimed treble damages for such infringement, as well as an injunction against further use and sale of the patented product.

The business decision to defend

22. (a) When the Conover patent issued and the litigation began, there were

only two courses of action open to Squibb: it could get out of the tetracycline market-- or it could fight. As a matter of business judgment, which involved balancing the possibility of a sizable adverse judgment and ouster from the tetracycline market against the more than $1,700,000 already spent to get into the market and the impending introduction of Mysteclin, Squibb decided to fight.

(b) Having made the decision to fight, there was only one way to do it--and that was to fight hard. Obviously Squibb would weaken its position, both in the market place and in the courts, if it hesitated in making or implementing that decision. Whatever might have been the doubts privately expressed between the management of Squibb and its patent counsel (and these are discussed later), so far as the public, the courts, its customers and

even its own employees were concerned, Squibb, as a necessary concomitant of its decision, took the position that, for purposes of fashioning business policies, it had to assume that the Conover patent was invalid.

The transfer motion and related procedural steps

23. At the outset of the litigation Squibb took the offensive against the Pfizer complaint by attempting to have the litigation transferred to a forum which, as Squibb then saw it, was less favorably disposed toward the patentee position in an infringement controversy and to a forum which for purposes of trial would be more convenient to Squibb as a party and to its witnesses and counsel. To that end Squibb promptly commenced against Pfizer in the United States District Court for the Southern District of New York a

declaratory judgment action with respect to the validity of the Conover patent and simultaneously moved in the Northern District of Georgia for dismissal of the Pfizer action against Squibb or, alternatively, for a transfer of that action to the Southern District of New York. The motion to dismiss was based on the argument that the Conover patent did not become effective until midnight of the date of issuance (January 12), that Pfizer had moved prematurely on January 11 and that the Northern District of Georgia, therefore, lacked jurisdiction over the subject matter of the action. Had Squibb been successful on that motion, the declaratory judgment action would have taken precedence in time over any suit that Pfizer might have reinstituted in Georgia, thus requiring a New York trial unless, as seemed doubtful, Pfizer could have

sustained the burden of showing that venue had been improperly laid in the Southern District of New York. The declaratory judgment action, the motion to dismiss and the transfer motion all reflected Squibb's view that the Southern District of New York would be more convenient to Squibb as a party and to its witnesses and counsel. More importantly, those procedural steps reflected Squibb's judgment at that time that the Southern District of New York and the United States Court of Appeals for the Second Circuit (to which an appeal from an adverse judgment of the Southern District would have been taken) were courts less favorably disposed toward the position of a patentee in infringement litigation than were the Northern District of Georgia and the Fifth Circuit.

24. Just as vigorously as Squibb sought to have the case transferred to what it then believed to be a more propitious forum, so Pfizer, believing the Northern District of Georgia and the United States Court of Appeals for the Fifth Circuit to be preferable from its standpoint, fought to have its choice of venue sustained. Even after the Georgia court had granted the transfer motion (declining to rule on the motion to dismiss), Pfizer pressed the fight and appealed the decision to the Fifth Circuit, at the same time petitioning that tribunal to direct the Northern District of Georgia, by writ of mandamus, to hear the controversy. The appeal and the petition for a writ of mandamus were both actively opposed by Squibb. The fuling of the District Court was ultimately affirmed, and the case was transferred to the Southern District of New York.

25. (a) Trial counsel for Squibb in the infringement litigation, who was given full and complete responsibility for preparation of the Squibb defense on the merits, was Mr. Roger T. McLean, senior member (after the death of Mr. Adams in May of 1955) of the firm of Messrs. Adams, Forward and McLean in New York City. Mr. McLean became active in the litigation in early February, after having completed the defense of an infringement action in the United States District Court for the District of Maryland.

(b) Mr. McLean had received an M.E. degree in 1931 and an M.S. degree in chemistry in 1933 from Stevens Institute of Technology and an LL.B. degree from Fordham University in 1934 and had been a practicing member of the New York and patent bars for some 20 years. He had devoted a substantial part of that time to

patent solicitation (prosecution of patent applications before the Patent Office and the courts) and to patent litigation for various pharmaceutical companies. Mr. McLean and his firm had been intimately involved with Squibb affairs for a considerable period and with the affairs of Mathieson Chemical Corporation for many years before its merger with Squibb. Squibb (Olin Mathieson) was, in all respects concerning the infringement litigation, guided by the judgment of Mr. McLean.

The Southern District pleadings

26. On April 15, 1955, after transfer to the Southern District had been ordered, Pfizer answered in the declaratory judgment action, denying the material allegations of the complaint and counterclaiming for treble damages of

$6,000,000 for Squibb's alleged infringement of the Conover patent and for an injunction against further infringement. In the reply that it filed on or about May 16, 1955, Squibb denied the material allegations of the Pfizer counterclaim and, consistent with its decision vigorously to oppose the Pfizer claims, pleaded five affirmative defenses thereto:

> "4. That said Patent 2,699,054 is invalid and void because no invention was required to devise and perfect the subject matter described and claimed therein in view of the state of the art prior to said alleged invention and because the subject matter of said patent, in whole and in all its parts, was obvious at the time the alleged invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> "5. The subject matter of said Patnet 2,699,054 was invented , known and/or used by others before the alleged invention thereof by the applicant for said patent.
>
> "6. The alleged invention was in public use and on sale in this country more than one year prior to the date of the application for said patent.

"7. The Patent Office was induced to grant Patent 2,699,054 by misleading and incorrect statements and the said patent is, therefore, invalid, void and unenforceable in any judicial proceedings.

"8. Defendant has used patent 2,699,054 as an instrument in an improper course of conduct, and the patent is, therefore, unenforceable in any judicial proceeding."

27. (a) The affirmative defenses alleged by Squibb in its reply to the Pfizer counterclaim constituted what have long been standard defenses in an infringement action. They were, for the most part, statutory in nature and were inserted by Mr. McLean largely to enable discovery of facts which, had they existed, would have been in the possession of Pfizer and would have fortified the Squibb hope (it had no conviction) that one or more of its defenses could be made to prevail. Mr. McLean, who had had extensive litigation experience in the infringement field, had

noted the very limited amount of information available publicly on the background of the Conover patent. That relative absence of background information suggested to him not only the desirability but also the real necessity of pleading such standard defenses, particularly since Squibb might not have been able, under the Federal Rules of Civil Procedure, to have gained discovery of any additional facts unless the defenses had been affirmatively alleged in its pleadings.

(b) For example, Squibb was aware that there was a cross-licensing agreement between Pfizer and Cyanamid involving the Duggar and Conover patents. While Squibb had no grounds for knowing whether that arrangement would support an "improper course of conduct" defense, it certainly had to discover whether improper restrictions had been imposed by any such

agreement or whether it had included some sort of provision, such as package licensing, the validity of which might have been open to question. Similarly, Mr. McLean's rather cautious wording of the so-called fraud defense was based on the fact that the Conover file wrapper contained several ex parte affidavits. Again, having no basis for knowing whether any affidavit statement was even arguably incorrect or misleading -- but recognizing that any defense along those lines could not have been pressed without investigating the background of the affidavit experiments-- Mr. McLean pleaded the fraud defense, as he did the misuse defense, as a basis for the discovery program out of which would come the position (whatever it might be) that Squibb would take upon trial of the action.

(c) The other affirmative defenses (e.g., lack of invention), which

simpley paraphrased statutory language, were also asserted to provide a broad basis for discovery before trial and a foundation for the possible introduction of evidence during trial. Indeed, Mr. McLean realized that Squibb would have been virtually out of court if he had failed to allege lack of invention, an issue upon which the largest number of patent controversies is determined.

Pretrial discovery

28. (a) The discovery program conducted in the companion actions brought by Pfizer against Bristol and Upjohn, with which Squibb was generally familiar, and the discovery program conducted by Squibb, although only in an early stage at the time of settlement, had occasioned even at that point many pages of depositions and the exchange of numerous documents. Spanning

the course of ten months, the depositions of six Pfizer employees had totaled almost 2,000 printed pages. Many more people had been noticed for the giving of testimony before trial, and a number of additional depositions, though not then noticed, were contemplated by both sides. The depositions were printed after transcription, rather than otherwise duplicated, because the defending parties realized that such a convenience would be a necessity in a case as large as the Pfizer infringement litigation was certain to become.

(b) Since document discovery was in its early stages and since the demand served by Bristol on Pfizer had called for the production of many thousands of documents, Mr. McLean had decided to await Pfizer's return on the Bristol request before determining whether he would serve

on behalf of Squibb a further demand on Pfizer. On its part, Pfizer had already served Squibb with a request for documents which would have necessitated four or five months of file searching for purposes of compliance.

Evaluation by Squibb of its infringement position

29. Squibb's assessment of its chance of winning or losing the infringement litigation was, of course, based upon its knowledge of facts relevant to the affirmative defenses and its interpretation of patent law principles then applicable to such facts and defenses, Those considerations are discussed below.

30. (a) All questions of patentability are resolved in accordance with the basic policy of the patent system-- "To promote the progress of science and the useful arts" (U.S. Const.

Art. I, Sec. 8). Thus, any person who contributes to the progress of science by giving to the public something which it did not before possess ("any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereon") is rewarded by the public with a patent monopoly which protects his invention for a limited time (35 U.S.C. Sec. 101). On the other hand, a person who lays claim to a subject matter previously available to the public has not conferred any benefit which would entitle him to the protection of the patent system. It is those principles which have shaped the codification of the patent law and which have guided judicial interpretation of that statute.

(b) Section 102 of Title 35, United States Code, provides that a person shall be entitled to a patent unless his

claimed invention falls within any of the prohibiting provisos of Section 102. Those provisos (which need not be detailed here) represent bars to the issuance of a patent and, as defenses, are referred to broadly as prior publication, prior use and prior invention.

(c) Squibb did not assert prior publication among its affirmative defenses to the Pfizer complaint and counterclaim, simply because neither the Duggar patent nor the Niedercorn patent (both of which covered a single antibiotic-- Aureomycin-- but neither of which referred to any additional product) could have constituted an anticipation of the Conover tetracycline invention--an omission from the disclosures of the printed patents that no amount of discovery could have supplied.

<u>The prior use defense</u>

31. Squibb's assessment of its chance of winning or losing on a prior use defense proceeded from basic principles of patent law and from facts available to it at the time of, and during, the infringement litigation. Squibb concluded that the defense was weak at best. That conclusion was based upon the following considerations.

Legal considerations

32. (a) Something that was known or used by others before a patentee's claimed date of invention cannot be withdrawn from the public domain since no quid pro quo has been conferred upon the public by the patentee. On the other hand, the mere fact that the thing patented was in existence prior to the patentee's invention does not defeat patentability unless the prior availability of the

subject matter to the public can also be shown. Tilghman v. Proctor, 102 U.S. 707 (1881); Carson v. American Smelting & Refining Co., 11 F.2d 766, 770-71 (9th Cir. 1926), cert. denied, 273 U. S. 695 (1926); see also Internationsl Nickel Co. v. Ford Motor Co., 166 F.Supp. 551 (S.D.N.Y. 1958). When, in fact, the public did not have access to that subject matter before the patented invention, the patentee, as first to bring it forth for the benefit of all, has truly fulfilled the purpose of the patent system and is entitled to its reward. Gayler v. Wilder, 51 U.S. 477 (1850); Dewey & Almy Chem. Co. v. Mimex Co., 124 F.2d 986, 989 (2d Cir. 1942).

(b) Accordingly, an invention is not anticipated by a prior discovery which has been abandoned or otherwise secreted from the public. Metallizing Eng'r Co. v. Kenyon Bearing & A. P. Co., 153 F.2d 516

(2d Cir.), cert. denied, 328 U.S. 840 (1946); General Elctric Co. v. Hoskins Mfg. Co., 224 Fed. 464 (7th Cir. 1915). Similarly, one who produces something accidentally and fails to recognize the value of the thing produced is hardly in a position to contribute it to the public fund of scientific information. Therefore, such accidental and unrecognized results do not (and did not) preclude the granting of a patent to someone who later recognizes their value and imparts his discovery to the public. United Chromium v. International Silver Co., 60 F.2d 913 (2d Cir. 1932); see also International Nickel Co. v. Ford Motor Co., supra. The law is also clear (and was at the time of, and during, the Pfizer infringement litigation) that the prior sale to, or use by, the public of something later patented by another does not constitute an invalidating

anticipation if such use were accidental and unrecognized, McKee v. Graton & Knight Co., 87 F.2d 262 (4th Cir. 1937).

(c) Applying those principles to the Pfizer infringement litigation, Squibb believed (consistent with reason and sound judgment) that its prior use defense would not be successful unless it could produce evidence that tetracycline came into existence through experimentation the results of which were recognized, appreciated and published to the world prior to the date of the Conover invention. At no time before or after Squibb entered into an agreement for the settlement of the infringement litigation did it possess any information of that character.

Factual Considerations

33. During the course of an experiment conducted by Squibb in January

of 1950 to explore the vitamin B12 producing capacities of the NRRL 2209 strain of Streptomyces aureofaciens (deposited by Cyanamid in connection with the Duggar patent), some indeterminate antibiotic activity was incidentally observed by Dr. David Perlman, a Squibb scientist. NRRL 2209 was being examined along with the other cultures in the development program for vitamin B12, with the thought that a culture capable of producing high yields of both B12 and some other useful product might be more desirable than a culture capable of producing only vitamin B12. To test the fermentation product of NRRL 2209, a paper strip chromatogram* [* Paper strip chromatography is a laboratory technique used to separate and presumptively to identify substances in solution. One end of a strip of paper is inserted in a solution containing the substances sought

to be separated. The solvent moves up the paper by capillary action, carrying with it the substances which, if the solvent is chosen properly, will separate out on the paper at different spots. The ratio between the distance moved by the solvent front and any substance in solution is termed the Rf value of that material. Only after the Rf values of various substances are determined can paper strip chromatography give presumptive evidence of the presence of such substances in solution. Tr. 5124-2.] was run and the material plated against a culture of Lactobacillus leichmannii, which was used to measure the vitamin B12 entities separated by chromatography. Instead of stimulating the measuring organism, the fermentation product inhibited its growth, and the presence of two antibiotic factors was indicated. Further study of an Aureo-

mycin preparation suggested that three antibiotic entities were present. A quarterly status report (which described the quarter in greater detail for permanent research records) noted that the experiments referred to in the earlier memorandum, as supplemented by some additional work, indicated six antibiotic factors in fermentation broth samples (arqueous nutrient media subjected to the action of a microorganism, in that case NRRL 2209) and two antibiotic products in the crude concentrates (material recovered from a fermentation broth, separated from the aqueous medium and partially purified). The last sentence of the quarterly report stated that "[F]urther studies will be carried out as time permits, pending determination of interest in the production of aureomycin" (SX 76B).

34. A lack of interest in Aureomycin and other considerations caused an abandonment of the Perlman experiments. The conduct of a research program necessitates choosing between various projects, and at that time Squibb had a number of projects already under way which were of higher priority than determining the identity of the antibiotics presumptively indicated by the Perlman work. First, Squibb's discovery, shortly thereafter, of organisms capable of higher yields of vitamin B|2 terminated its interest in S. aureofaciens as a possible B|2 producer. Secondly, the primary objective of Squibb's antibiotic program at that time was a product superior to Aureomycin--one that would attack true viruses and would, therefore (or so Squibb thought), achieve greater commercial acceptance than another compound of the

Aureomycin spectrum. Moreover, earlier experience had made Squibb somewhat indifferent to multiple chromatographic spots. In connection with streptomycin experiments, Squibb had observed multiple chromatographic spots that subsequent work proved were produced not by the presence of multiple entities but by the tautomeric behavior of streptomycin itself.*

[*Tautomeric behavior is a phenomenon exhibited by certain compounds which (in the classical illustration) can exist in alcohol (or enol) or aldehyde (or keto) form. When such a compound is found under certain solution conditions, a constant shifting of a hydrogen atom causes a reversible equilibrium between the aldehyde (or keto) and alcohol (or enol) state of the compound, giving indications under certain tests of two compounds, whereas in the normal solid state only one is present.

Similarly, broth samples containing high levels of sodium sulphate or other salts gave false chromatographic indications of multiple entities when such separate spots were merely tautomeric forms of the single material tested.

35. The Perlman experiments were never followed up by Squibb, and the incidental observation of multiple spots was never made known outside of the Squibb organization. Whether the additional antibiotic factors presumptively indicated by chromatographic work were actually present, and what additional antibiotics, if any, caused the multiple spots, are questions which Squibb could not answer back in 1950 and, even with the advanced state of the art, could only guess at today. Under applicable patent law principles, therefore, Dr. Perlman's experiments could hardly have supported a

defense based on anticipation by prior use, not only because that work had been abandoned and kept secret but also because there had been no recognition of what might have been inadvertently produced.

36. It was at a luncheon conference in September of 1953, on another matter, between a Squibb scientist and a Lederle scientist, that Squibb for the first time learned of the existence of tetracycline. A few days later the discovery of tetracycline was published in the Journal of the American Chemical Society (JACS), and in October of 1953 several papers concerning tetracycline were delivered to the annual Antibiotics Symposium. One of those, the Minieri paper, revealed that tetracycline could be produced by direct fermentation--a disclosure which motivated Squibb to examine its culture collection to determine

whether it could trace an earlier isolation of tetracycline and thus establish a patent position of its own. Another paper, by Dr. Bohonos, assisted that examination by giving Squibb a critical method for differentiating the "tetracyclines" by chromatography.

37. The Bohonos paper was presented orally, and it was not until after Squibb had received a printed copy that it attempted, in January of 1954, to duplicate the described chromatographic technique. In the course of that work Dr. Perlman spotted separate papers with Aureomycin, tetracycline and mixtures of the two antibiotics and observed that an Aureomycin preparation (derived from capsular material) showed some fluorescence at the spot to which tetracycline would be expected to move under the Bohonos system. At first, Dr. Perlman suggested that the

indication of tetracycline in Aureomycin might have been due to inadequate cleaning of the pipette used to apply Aureomycin to the solution under observation. A subsequent chromatogram was run using separate pipettes to prevent contamination of one antibiotic with the other, but the result confirmed the finding of the earlier experiment. That observation marked the first time that Squibb had any indication that tetracycline might be present in commercial Aureomycin.

38. (a) Dr. Perlman reported the results of the experiment to his superior, Dr. Richard Donovick, who then hypothesized that any organism capable of making one tetracycline might also be capable of producing other members of the group. The Donovick hypothesis was supported by most, but not all, of the chromatographic work subsequently done on that subject and by

elemental analysis* [* Elemental analysis is a method of estimating the composition of a compound on the basis of the atomic weights of the elements known to be present in that compound. Tr. 5|49.] made possible by published analytical data.

(b) Like chromatography, elemental analysis represents merely presumptive evidence of the presence of a particular substance but is not as reliable for that purpose as a critical paper strip chromatrographic system. Thus, neither the chromotographic work nor the elemental analsyses run by Squibb actually proved that tetracycline accompanied Aureomycin in fermentations or in the commercial product.

39. Shortly after the Donovick hypothesis, however, Squibb undertook a program, one part of which did establish that a minute amount of tetracycline was coproduced with Aureomycin under

fermentation conditions described by the Duggar patent using the culture (NRRL 2209) deposited by Cyanamid in connection with that patent. The possibility suggested by the Donovick hypothesis (that any culture producing one of the tetracyclines might be capable of producing other members of the group), combined with a recognition that its previous concentration of efforts in the antiviral field had been overly ambitious and a growing awareness that new discoveries in the tetracycline area might be "well nigh essential for competitive survival" (SX 80B), caused Squibb in April of 1954 to redirect its antibiotics program toward the following objectives: (i) continued review of work done with cultures in the Squibb collection to determine whether Squibb had earlier isolated another "tetracycline" or tetracycline itself--either of which possibilities might give it

a product patent position; (ii) screening new cultues for the discovery of a fourth member of the tetraycline group; and (iii) developing a new process for the production of tetracycline. The last goal actually entailed three separate projects: the search for cultures capable of high productivity yields of tetracycline; the development of productive substrains of known cultures; and, ultimately, the development of a commercial method of recovery, which would be necessary if Squibb ever reached the stage of manufacture. The first step in the third project was to gain "preliminary information" (Tr. 5208-09) that eventually "could be applied by the Development Division [of the Squibb Institute for Medical Research] to the problem of large scale isolation methods" (NCX 175B).

Like most research efforts at Squibb, the

experiments necessary to accomplish that step were also designed to achieve additional objectives, e.g., to supply material that might be useful if the patentability of tetracycline were questioned and to confirm the direction that Squibb thinking had taken as a result of the Donovick hypothesis, which in large part was responsible for reorientation of the antibiotics program.

40. Accordingly, Dr. James Dutcher was assigned the task of using broths produced under Duggar patent conditions for his isolation experiments. After a full-scale research program entailing considerable manpower, expense and ingenuity, Dr. Dutcher proved by extraction that tetracycline was coproduced along with Aureomycin in fermentations conducted under the agency of NRRL 2209 (see Proposed Finding 47, infra). Squibb realized,

however, that the Dutcher work standing alone would be valueless as a defense under applicable patent law principles. For while Squibb might have been able to establish through Dr. Dutcher's experiments that tetracycline had been produced under prior art processes, as far as Squibb knew the previous existence of tetracycline had been accidental, unappreciated and unrecognized prior to the date of the Conover invention. When extensive depositions and additional discovery adduced no evidence that tetracycline had been recognized by anyone prior to Conover's discovery, Squibb entertained little, if any, hope of winning the litigation on the basis of a prior use defense.

The Fraud Defense

41. (a) Nor did Squibb believe at the time of settlement that it could successfully establish the elements of a

fraud defense. Fraud in the prosecution of a patent must be demonstrated, as must fraud charges in general, by proving five essential elements of the defense: (1) that a false representation, (2) with reference to a material fact, (3) was made with knowledge of its falsity, (4) with intent to deceive, and (5) that action was taken in reliance upon the representation. United States v. Cold Metal Process Co., 62 F. Supp. 127 (N.D. Ohio 1945), aff'd, 164 F.2d 754 (6th Cir. 1947), cert. denied, 334 U.S. 811 (1948); see also Pacific Royalty Co. v. Williams, 227 F.2d 49 (10th Cir. 1955), cert. denied, 351 U.S. 951 (1956). Moreover, fraud cannot be established by a mere preponderance of the evidence but must be proved by evidence that is "clear, unequivocal and convincing". United States v. American Bell Telephone Co., 167 U.S. 224, 251

(1897); United States v. Cold Metal Process Co., supra.

(b) Pfizer's ex parte prosecution of its Conover application after dissolution of the second interference (and thus all affidavits filed and statements of counsel made during such ex parte prosecution) related primarily to one issue of fact--coproduction of a certain amount of tetracycline under prior art processes. That fact was, however, quite immaterial as a matter of law to the issuance of the Conover patent, since pre-Conover recognition of tetracycline was nowhere indicated in the prior art (see Proposed Finding 32, supra). Moreover, in basing his assumption of coproduction on post-Conover references (i.e., the Minieri application), the examiner again erred as a matter of law. In re Williams, 171 F.2d 319 (C.C.P.A. 1948). Whether the materiality

element of fraud must be established in accordance with statutory requisites for patentability (i.e., whether the false statement must concern a fact upon which the patentability of the invention depends) or whether that element can be satisfied by the patent examiner's subjective state of mind (i.e., can be predicated on misrepresentation of a fact which is immaterial to patentability but which is, nevertheless, deemed material by an examiner mistaken as to the law) was in 1955, and remains today, an issue far from resolution. But since most relevant precedents indicated that a patent was not rendered unenforceable by an applicant's misrepresentation of a fact objectively immaterial to patentability, any fraud defense based on Pfizer's ex parte prosecution of the Conover patent application would have been founded on

questionable legal grounds. Corona Cord Tire Co. v. Dovan Chem. Corp., 276 U.S. 358 (1928); Foundry Equipment Co. v Carl-Mayer Corp., 128 F. Supp. 640 (N.D. Ohio 1955), aff'd per curiam, 233 F. 2d 179 (6th Cir. 1956).

42. (a) Even under the contrary view of materiality, however, Squibb saw nothing, on an initial reading of the Conover file, which indicated that the Patent Office had been misled or defrauded. In so far as the "remarks" or amendments in the Conover wrapper reflected statements made by Pfizer counsel, they appeared to Squibb to restate, in a proper fashion, the arguments of attorneys expressing an advocate's point of view. Attorneys before the Patent Office are given the same license as that accorded to counsel before a court to emphasize argumentatively one position and to understate of disparage the

other. Patents are not granted on the basis of attorneys' arguments, the only probative material in Patent Office proceedings being records and affidavits concerning the claimed invention. Application of Kniel, 169 F.2d 820, 823 (C.C.P.A. 1948); Application of Mason, 154 F.2d 294 (C.C.P.A. 1946). The fact that Patent Office rules do not require a verbatim transcript of interview but, rather, require only that counsel recount in a summary writing any argument presented orally to the examiner (37 C.F.R. Secs. 1.2, 1.133(b); Manual of Patent Examining Procedure, Sec. 713.04) does not make an advocate's position any more or less probative of facts which must be proved to the satisfaction of the examiner by further experimentation verified in affidavit form. Unquestionably, Mr. Lidoff reasoned in just those terms, for not only did he

specifically reject the advocacy of Pfizer's counsel but he required Pfizer to disprove by affidavit experiments his speculation with respect to the prior art. That action certainly indicated that the examiner was not misled by any statements of Pfizer counsel and thus attenuated any defense based on a contrary position.

(b) Furthermore, Squibb had no reason to doubt that the statements attributed to Mr. Lidoff concerning the ground rules for the affidavit experiments had been accurately reported by Pfizer counsel. Indeed, knowing that Mr. Lidoff had had ample opportunity to review those statements and knowing Mr. Lidoff as it did, Squibb believed that any misrepresentation of his position would have been promptly corrected by Mr. Lidoff in subsequent additions to the Conover file.

43. Nothing produced during extensive discovery changed Squibb's evaluation of the merits of the so-called fraud defense. As stated previously, that defense was alleged to provide a basis for investigating the background of experiments which underlay the preparation of various affidavits included in the Conover file. Drs. Murphy, Tanner and Bogert, the deponents principally concerned with the affidavit experiments, impressed Squibb as telling straightforward stories. Their testimony, combined with other depositions and document discovery, confirmed the opinion formed by Squibb from an initial reading of the Conover file that Lidoff had specified the experiments he wanted performed and the manner in which the work was to be conducted and that his instructions had been carried out by the Pfizer scientists.

44. Thus, Squibb believed that Dr. Tanner, in accordance with Mr. Lidoff's directions, had prepared broths under the fermentation conditions prescribed by the Duggar and Niedercorn patents in a manner which did not depart in any material respect from the indicated processes. That Dr. Tanner, following Niedercorn's Example 28 (which suggested a pH of "about 5.0 to 8.0") had allowed the broth to remain at a pH of 8.1 for the first six hours of a forty-hour fermentation was a fact which Squibb did not even seriously consider presenting to the court. In the first place, Squibb realized that a pH of 8.1 did, in fact, comply with an "about 5.0 to 8.0" pH specification. Moreover, it was Squibb's opinion that a difference between a pH of 8.0 and a pH of 8.1 was so inconsequential (one part in a hundred billion as compared with one part in 125 billion)

that any argument of fraud premised on an alleged divergence of that scale would have been nothing short of ridiculous.

45. (a) Squibb had a similarly poor regard for any argument that the Patent Office had been misled or defrauded by the failure of the Tanner or Bogert affidavits to specify broth potencies. Squibb counsel had had earlier experience with Mr. Lidoff in connection with the prosecution of other patent applications and regarded him as a person of high intelligence, who was quite knowledgeable in the areas of competence covered by the Conover proceedings, was not easily swayed and had no hesitation in requiring the production of evidence to resolve any doubts that he had about affidavit experiments or otherwise. Squibb believed, therefore, that in designating the use of NRRL 2209, Mr. Lidoff must have been aware,

as would anyone even generally familiar with the antibiotics field, that the initial culture deposited by Cyanamid in connection with the Duggar application would produce a broth of low potency. In any event, Squibb had little doubt that if Mr. Lidoff had wanted information concerning broth potencies, he certainly would have asked for it.

(b) The fact that the broth potencies achieved in the affidavit experiments were of a relatively low order did not indicate to Squibb that Dr. Tanner had departed from the specified fermentation processes. For not only had Squibb estimated that NRRL 2209, as an initial deposit, would be a low producer but Squibb had actually obtained many broths within, and lower than, the low potency range of the Tanner fermentations in its own work with that strain under

Duggar patent conditions.

46. (a) Neither an initial reading of the Conover file nor many months of pre-trial discovery indicated to Squibb that the Bogert affidavits could be made the basis of a fraud claim. It was Squibb's understanding at the time the depositions were conducted that Mr. Lidoff had designated the recovery procedures he wanted Pfizer to use and that Dr. Bogert had followed those procedures without any material departure. Squibb was also convinced as a result of its prior experiences with Mr. Lidoff that, had the examiner entertained any doubt about the utility of those recovery methods or the desirability of using further techniques to determine the existence or nonexistence of a fact he thought relevant, he would certainly have required Pfizer to resolve that doubt. Indeed, the examiner did just

that in requiring Dr. Bogert to file a supplemental affidavit supplying further details concerning the recovery experiments.

(b) Moreover, certain that a person as well-versed in chemistry as was Mr. Lidoff would have been aware of such techniques as Craig countercurrent distribution and column chromatography, Squibb believed that had the examiner wanted Pfizer to employ those procedures he would have directed it to do so. The fact that Mr. Lidoff declined to specify Craig or column chromatography appeared to Squibb to be a perfectly reasonable decision. In Squibb's opinion those methods, though useful in separating relatively pure materials of different solubility in immiscible solvents or of different adsorption characteristics, would have had no utility when applied to the

"gunk" taken out of a Duggar or Niedercorn fermentation unless other procedures were first applied to refine the crude concentrate. Nor was Squibb surprised by the fact that three recovery methods known to the Patent Office (because of pending applications) were selected by an examiner who specifically declared his disinterest in requiring "an elaborate research program to be carried out" (NCX 118, pp. 38-39) and were used by an applicant following those directions. It was the very unavailability of generally known techniques for the separation of tetracycline from Aureomycin in fermentation broths that prompted the Dutcher recovery work in 1954--and that project was certainly regarded by Squibb as (and was in fact, as will appear below) an "elaborate research program".

47. (a) In approaching the task of recovering tetracycline from a Duggar

fermentation using NRRL 2209, Dr. Dutcher recognized three phases of the problem: the first (assuming tetracycline to be present with the chlortetracycline), to isolate the antibiotics from the broth as crude concentrate in solid form; the second, to refine the crude concentrate by removing the antibiotics from inert contaminants; the third, to separate the antibiotics and crystallize the tetracycline. Of course, crystallization could not be accomplished until refinement had been completed, and refinement could not be undertaken until a crude concentrate had been obtained from the filtrate. After numerous experiments with generally known procedures, Dr. Dutcher was able to solve the first phase of the problem without excessive difficulty. The same may be said for the separation and crystallization part of the experiment. It was the second or

refinement phase of the program that entailed the greatest problems.

(b) Without discussing the elaborate detail of his work or the skills exhibited by Dr. Dutcher and his staff in completing that project, it is sufficient to note that work which was originally scheduled for completion in from four to a maximum of six weeks necessitated the application of 4,000 to 5,000 man-hours by five scientists over the course of six months, all at an approximate cost to Squibb of between $30,000 and $50,000. In appraising the degree of ingenuity demonstrated by Dr. Dutcher and his group, Dr. Asger Langlykke, head of the Squibb Institute for Medical Research, testified:

> "Dr. Dutcher is one of our top ranking chemists. I think that he displayed outstanding ingenuity and skill and diligence in tackling this problem which proved to be a very discouraging one." Tr. 5|70.

(c) The fact that Pfizer's demand for documents would have required Squibb to produce the records of the Dutcher work (and thus reveal the "elaborate research program" that Squibb had found essential in order to obtain tetracycline from a Duggar fermentation using NRRL 2209) certainly failed to improve Squibb's appraisal of the fraud defense.

48. Thus, Squibb realized, after extensive discovery, that its chance of winning the litigation on the basis of a fraud defense was slight at best. Indeed, Squibb thought so little of its fraud position that it seriously considered dropping the defense entirely. In the first place, Mr. McLean had recently completed trying a case (Carter Products Inc. v. Colgate-Palmolive Co., 130 F. Supp. 557, 568 (D. Md. 1955), aff'd, 230 F.2d 855 (4th Cir. 1956)) involving a claim

of fraud which in his opinion had had a far stronger foundation in fact than the case against Pfizer. Nevertheless, in a decision by the Maryland District Court (affirmed on appeal by the Fourth Circuit), the fraud allegation was "brushed aside" in several sentences (TR. 5696). Moreover, Squibb was aware that the likely failure to support a fraud accusation at trial might well have impaired the effectiveness of any other arguable defense. That Squibb's apprehension in that regard was well founded was demonstrated by, for example, Seiberling Rubber Co. v. I.T.S. Co., 134 F.2d 871 (1943), in which the Sixth Circuit viewed unwarranted arguments of fraud as discrediting other defenses and indicated that it held for defendant (on the basis of valid defenses) in spite of that party's fraud accusation:

> ". . . The palpable innuendo in injecting those references [fraud] into the argument but tended to raise an inference of appellant's lack of confidence in the meritorious defense presented, -- and inference dispelled only by careful analysis of the patent in relation to prior art, and careful consideratiion ot the brief of amici curiae." 134 F.2d at 875.

The lack of invention defense

49. It was the lack of invention defense that Squibb viewed as presenting the best chance of success in the infringement litigation. The argument that Squibb planned to advance in that regard (but had not, prior to settlement, had an opportunity to try to support through discovery) was that Dr. Conover's prior knowledge of the structures of Aureomycin and Terramycin rendered uninventive his conception of the structure of tetracycline, his recognition that tetracycline would have antibiotic properties and his production of

tetracycline by catalytic hydrogenation of Aureomycin. There were, however, obvious weaknesses in that defense both from a technical and from a legal standpoint.

50. First, Section 103 of Title 35 defined obviousness (as it does now) in terms which strongly indicate that the background against which inventiveness must be judged is the fund of public information rather than the personal knowledge of the inventor -- a standard which is, of course, consistent with the policy of the patent system to encourage inventors to bring forward useful discoveries that were not previously accessible to the public:

> "A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. . . ." [Emphasis added.]

No phrase in the patent law has been defined with greater frequency than "prior art", which is uniformly construed to mean the state of learning and knowledge of the public at the time the claimed invention was conceived (1 Walker, Patents Sec. 26 (Deller's ed. 1937) and cases cited). Thus, the "differences" referred to in Section 103 (the degree of which would make the invention obvious or nonobvious) should be those between the subject matter sought to be patented and the information publicly available at the time of conception of the claimed invention. Under that construction of Section 103, the prior knowledge of the public, not that of the inventor, would be the determinant issue. The fact that Section 103 reads in the subjunctive -- "would have been obvious" -- and provides a mythical party against whose knowledge inventiveness must be appraised -- "to a

person having ordinary skill in the art" -- rather than denying patentability to a subject matter which "was obvious to the inventor", further reinforces that statutory interpretation. Accordingly, Pfizer could have argued, and persuasively so, that Dr. Conover's awareness of the molecular structures of Aureomycin and Terramycin at the time of his tetracycline invention was totally irrelevant, since that information, kept secret within the Pfizer organization until publication in JACS, had not been imparted to the scientific community at the time of the Conover invention.

51. Secondly, with regard to its lack of invention argument (i.e., that the conception and production of tetracycline did not constitute an inventive step over the determination of the Aureomycin and Terramycin structures) Squibb recognized as

the logical extension of that argument that it was the work of the Pfizer structure group in connection with the Conover discovery that constituted the entire tetracycline invention. But that proposition would not have been without answer by Pfizer, for the possibility was quite apparent that the structure team might have been joined as inventors under a then recent amendment to the patent law:

> "Whenever a patent is issued and it appears that a person was a joint inventor, but was omitted by error and without deceptive intention on his part, the Commissioner may, on application of all the parties and assignees, with proof of the facts and such other requirements as may be imposed, issue a certificate adding his name to the patent as a joint inventor.
>
> "The misjoinder or nonjoinder of joint inventors shall not invalidate a patent, if such error can be corrected as provided in this section. The court before which such matter is called in question may order correction of the patent on notice and hearing of all parties concerned and the Commissioner shall issue a certificate accordingly." 35 U.S.C. Sec. 256.

Although Section 256 had not been judicially interpreted at the time of settlement, Squibb realized that the statutory language could certainly have been construed to permit the appropriate correction, thereby foreclosing any defense based on lack of invention and further safeguarding the validity of the Conover patent.

52. (a) Moreover, Squibb was fully aware that Pfizer could develop a persuasive case to the effect that the Conover work exhibited considerable inventiveness over the structural determinations. Squibb knew, for example, that Pfizer could call upon Dr. Woodward (one of the principal members of the Pfizer structure team and himself a scientist and organic chemist of the highest international stature) and numerous other experts to testify that reasoning by

analogy was generally unsound in organic chemistry and particularly unsound with respect to oxy and chlortetracycline; that seemingly minor differences in molecular structures, such as the chlorine atom in Aureomycin and the hydroxyl group in Terramycin, frequently make enormous differences in chemical behavior; that the most reasonable expectation would have been that the removal of those groups, which are functional in many molecular structures, would completely destroy the antibiotic activity of the molecule; that, at any rate, the properties of the common structure (if one could be produced) would be entirely unpredictable; and that Conover had indeed proceeded in a course directly contrary to the teachings of the prior art -- a fact which reinforced the inventiveness of his discovery. Poulsen v. Coe, 119 F.2d 188 (D.C. Cir. 1941);

Mathieson Alkali Works v. Coe, 99 F.2d 443 (D.C. Cir. 1938).

(b) Squibb also realized that Pfizer would have no difficulty in adducing expert testimony (again, probably Dr. Woodward) to the effect that any a priori prediction that the catalytic hydrogenation of Aureomycin would have removed the chlorine atom without otherwise affecting the basic structure of the molecule would not have been nearly so reasonable as the contrary prediction that any known method of hydrogenation would have disintegrated the Aureomycin molecule, producing entirely unrelated chemical structures. Testimony of that nature would, of course, have severely undermined Squibb's lack of invention argument, even assuming that a court might have found that it was the knowledge of Dr. Conover, not that of the public, that formed the standard against

which inventiveness should be determined.

53. Furthermore, in Squibb's opinion a judicial determination that tetracycline constituted a valuable contribution to mankind would have completely eliminated any lack of invention position. First, in any close case evidence (abundantly available to Pfizer) that an invention has fulfilled an important need and has been widely accepted by the industry is deemed virtually conclusive as showing that the discovery was unobvious from prior art and, therefore, entitled to patent protection. E. I. duPont de Nemours & Co. v. Glidden Co., 67 F.2d 392 (2d Cir. 1933); Dewey & Almy Chem. Co. v. Mimex Co., 124 F.2d 986 (2d Cir. 1942). Secondly, Pfizer could produce experts to testify that the public had been benefited substantially by the Conover invention. And the likelihood that a district judge

would make a finding of that nature was considerably enhanced in Squibb's view by the probability that Pfizer (using a common tactic of plaintiffs in infringement actions) would introduce in evidence the Squibb advertising that had promoted tetracycline as a vast improvement over previous broad spectrum antibiotics.

54. Finally, after Squibb had moved successfully to transfer the case to New York, the Second Circuit announced a decision in Lyon v. Bausch & Lomb Optical Co., 224 F.2d 530 (1955), which forced Squibb to reappraise even further the merits of its lack of invention defense and, of course, the earlier advisability of the transfer. In Bausch & Lomb, Judge Learned Hand viewed then recent amendments to the patent law as rolling back the standards of invention to the more liberal tests of the early 1920's--standards which

considerably favored patentees and thus further weakened Squibb's lack of invention position.

The misuse defense

55. As earlier discussed (see Proposed Finding 27, supra), the "improper course of conduct" defense was alleged by Squibb to provide a basis for inspecting the Pfizer-Cyanamid licenses and for gaining discovery with respect to that relationship in general. Depositions in that area had not taken place by the time of settlement, and during the course of discovery completed prior to settlement, nothing had been developed which indicated to Squibb that a misuse defense would have been successful. Even had that charge been sustained, however, it might merely have operated to insulate Squibb from damages for past infringement--for once a patentee

has purged himself of prior objectionable conduct (which action can be taken even after trial has commenced), he can proceed to enforce his patent. Metal Disintegrating Co. v. Reynolds Metals Co., 228 F.2d 885 (3d Cir. 1956); White Cap Co. v. Owens-Illinois Glass Co., 203 F.2d 694 (6th Cir. 1953).

Other considerations weighed by Squibb in assessing its position in the infringement litigation

56. (a) The uncertainties of litigation in general also made it impossible for Squibb to predict with any conviction the outcome of the infringement litigation. One factor, which would have had considerable bearing on any close question of fact involved in the case, but which could by no means have been ascertained at the time of settlement, was the impression that numerous witnesses of

both parties would have made on the trier of fact. Moreover, even the personal experiences of the district judge or of other judges who would probably have had a part in the ultimate determination could very well have influenced a decision in a case such as the Pfizer litigation. For example, an issue which could have been dispositive of Squibb's best defense--lack of invention--was the degree to which Dr. Conover's invention contributed to the well-being of mankind (see Proposed Finding 53, supra). With the tremendous usage of tetracycline during the course of four or five years (the case was still a long way from trial when settlement was finally reached) and its proven efficacy in the treatment of numerous diseases, the possibility that any judge deciding the issue had known someone whose life had been saved by tetracycline therapy was not

wholly inconceivable. To a judge with experience of that nature, mankind would certainly appear to have benefited by Dr. Conover's invention--and the lack of invention defense would accordingly have seemed untenable.

(b) Furthermore, the number and identity of judges to whom the case would ultimately have been presented could not be predicted. At that time the Southern District had been assigning to special masters large patent cases like the Pfizer litigation. If, as seemed likely, the case were sent to a master, it would have proceeded from that level to any one of the number of judges in the Southern District by whose order the master had been appointed. With enormous economic interests at stake, either side losing before the district court would unquestionably have appealed the case to an

indeterminate panel of circuit court judges (which is frequently supplemented by district court judges and by visiting jurists), and the party there unsuccessful would probably have petitioned for, and might have been granted, a writ of certiorari by the Supreme Court. Thus, any forecast of the ultimate decision in the Pfizer action would have necessitated a guess by Squibb as to the manner in which a conceivable total of 14 judges would have weighed the evidence and viewed the various issues involved in the litigation. While a prediction of that nature would have been difficult enough after a decision of the trial court and argument on appeal to three known judges, it could have been nothing more than mere speculation (as Mr. McLean put it, "rolling dice in the Halls of Justice", Tr. 5705) when the litigation had proceeded only as far as the initial stages

of discovery and the identity of those who would hear the case even in the first instance still remained wholly undetermined.

Settlement

57. (a) The strong possibility that it would lose the litigation, sustain treble damages and be ousted from a market in which its position was steadily improving as a result of expanding sales of Mysteclin was, therefore, early brought home to Squibb by the general uncertainties of litigation as well as by known weaknesses in its affirmative defenses. Just on an initial evaluation of the case, Mr. McLean advised Squibb to settle at any royalty up to 5% of sales--a common base in the ethical drug industry. As discovery progressed, further revealing deficiencies in affirmative defenses, Mr. McLean continued to urge settlement at the 5%

figure.

(b) In its initial purchase agreement, Squibb had authorized Bristol to settle any future patent controversy with respect to tetracycline at any amount up to "5% of the price to the retail trade" of all tetracycline and tetracycline-containing products sold by Squibb. During the course of the litigation, the recognized possibility of receiving an unfavorable decision and of incurring further damages for any depression of the Pfizer price that might have been caused by Squibb reductions had an undeniable influence on Squibb's pricing policies. For example, in June of 1955 Squibb declined to reclassify a private hospital as a tax-supported institution, explaining:

> "Because of the present status of the law suit we are involved in on Steclin, we are not completely free to take what might be called normal competitive action to

overcome what some of the manufacturers of Tetracycline products are doing." SX 146.

And in July of 1955, Squibb undertook to clarify in the following terms the reasons underlying its then recent price instructions:

"I can understand why you are somewhat confused about our instructions on bid prices of Steclin. Anyone going back over the instructions which have gone out from this office would find it difficult to comprehend.

"There is no part of our operation which changes so quickly. What we are doing today, may be completely out of date one month from now. We can not predict anything. Our action is predicated completely on what competition does. We do not originate, we merely follow. As long as we have the legal action pending we can not do otherwise." [Emphasis added.] SX 150.

The testimony of Mr. McLean makes the meaning of those exhibits perfectly clear:

"Q. Now, what effect would that [price-cutting by Squibb] have

had, if any, upon the damages that might have been sustained?
"A. It could have been very serious and that was an item from the standpoint of lawyers we were very much worried about.

"Q. Will you explain that?
"A. Yes. If Squibb instituted a price cutting situation and forced Pfizer to reduce its prices to keep themselves competitive and we had lost the lawsuit, Pfizer undoubtedly would have claimed that the difference between the sales price it could have gotten without our competition and price cutting and the difference between what they got as a result was part of their damages and inasmuch as Pfizer's sales, I don't know, I could just make a guess, they were ten times Squibb's, I don't know what they were, but they were larger, presumably, we might have found ourselves paying out more in damages than we completed in sales and that was a very worrisome item."

58. In mid-October of 1955, when Bristol learned that Upjohn had been negotiating with Pfizer for an independent settlement, Mr. Schwartz went to Kalamazoo with certain of his staff to discuss the situation with Upjohn executives. At that

meeting Upjohn expressed considerable concern over its indemnification of Bristol in view of its deteriorating position in the lawsuit and indicated its interest in negotiating a "separate peace" (Tr. 779-80) with Pfizer on the basis of purchasing from Pfizer a part of the Upjohn bulk tetracycline requirements. The loss of any of its bulk sales at that time would have been particularly critical for Bristol, since the financial stability of the company depended on such business (and the possibility of finding another customer to purchase bulk tetracycline during the pendency of the litigation was extremely unlikely). Thus, to safeguard the continuation of the most vital segment of its operations, Bristol agreed with Upjohn, in a contract formalized on November 3, 1955, to reverse the indemnification provisions of the earlier purchase agreement on the

following conditions:

(1) that Upjohn buy its domestic tetracycline requirements from Bristol during the infringement litigation and for three years thereafter;

(2) that Upjohn refrain, without Bristol's consent, from engaging in settlement negotiations with Pfizer;

(3) that if Bristol were able to arrange a settlement agreement which (a) obtained for Upjohn a direct license to purchase, use and sell tetracycline to the drug trade and (b) released Upjohn from liability for past infringement, Upjohn would pay one half of any damages and future royalties based on the tetracycline that Upjohn purchased from Bristol; and

(4) that Bristol would not enter into any settlement agreement without Upjohn's consent, but that such consent

would not be unreasonably withheld by Upjohn.

59. Having agreed to a reversal of the indemnification provisions of its contract with Upjohn, Bristol determined to extend to Squibb the identical terms. Squibb was, of course, quite willing to effect a reversal of the prior indemnity obligations. The agreement, executed on November 18, 1955, was a duplicate of the Upjohn agreement, thus requiring Squibb, like Upjohn, to accept any reasonable settlement that Bristol could arrange. But with full appreciation of its continued exposure to the greater risk-- ejection from the tetracycline market and thus the discontinuance of its Mysteclin sales-- Squibb was eager, as its counsel advised, to obtain a reasonable settlement.

60. (a) An opportunity for settlement presented itself when a man

named John Broady was convicted on December 8, 1955, of, among other things, the illegal interception of Squibb telephone communications. Evidence adduced at the Broady trial established (1) that Broady's staff had tapped Squibb and Bristol wires; (2) that in so doing they had intercepted Squibb communications with its attorneys relating to the issuance of the Conover patent and to Pfizer's commencement of the infringement litigation; and (3) that Pfizer had paid Broady $60,000. That the introduction of such evidence in the infringement litigation might have had some psychological effect at trial and some legal effect on the ultimate decision was conceivable; that the Broady conviction had influenced Pfizer's attitude toward settlement was another realistic possibility.

(b) Bristol sent a copy of the record of the Broady trial to Pfizer patent counsel, informing them of the intention to interject the episode into the infringement litigation. Amended pleadings were prepared immediately thereafter, charging Pfizer with unclean hands as a result of its interception of confidential attorney-client communications concerning litigation strategy. Pfizer was then notified that the depositions of Mr. Robert Porter (Pfizer general counsel, who testified at the Broady trial) and of other responsible Pfizer executives would be reached as rapidly as possible in an effort to explore extensively the background of the entire incident--a situation that obviously portended continued notoriety for the Pfizer Company.

61. Just seven days after the Broady conviction, Pfizer agreed to a

settlement of the infringement litigation. Squibb was then convinced, as the evidence in the present case now demonstrates, that the responsible factor for Pfizer's willingness to settle the litigation was its interest in avoiding further embarrassing publicity in connection with the Broady affair. But whatever motivated Pfizer to settle, the substantial risks to Squibb of losing the litigation and the consequent danger of ejection from the tetracycline market made Squibb more than willing, quite apart from its contractual obligation under the November agreement with Bristol, to accept a settlement on the offered terms.

62. Pursuant to the agreement of November 18, 1955, Bristol conducted all negotiations with Pfizer concerning the settlement of the litigation. Those negotiations resulted in an agreement in

principle, which was summarized in a "letter of intent" drafted and signed on December 15, 1955. Due to the ensuing Christmas holidays, further negotiations between Pfizer and Bristol did not resume until after the first of the year. Problems which then arose delayed for an additional period--until March 28, 1956--the execution of the formal settlement papers.

63. (a) Two major points of dispute developed between the parties in fashioning final settlement papers out of the December 15 agreement in principle. First, that document contained a provision (par. 7) which would have applied the rate of royalty to tetracycline products distributed as free goods and samples. Bristol contended that the inclusion of any free material in the royalty base was a term which had escaped its attention during

the late hour and was not part of the agreement which Mr. Schwartz had understood he had made with Mr. McKeen. After further protracted negotiations on that subject, Pfizer agreed to exclude free goods and samples from the determination of royalties.

(b) The second problem area involved a proposed royalty reporting form drafted by Pfizer counsel. That form required the detailed disclosure of such deductions from gross sales as cash discounts, trade discounts, brokerage fees, third-party (dealer) commissions, shelf stock adjustments, transportation charges, credits on returned goods and taxes, all of which Squibb regarded as confidential information which it was disinclined to reveal either to Pfizer or to Bristol. In the opinion of Squibb counsel, Mr. McLean, the proposed form constituted a departure

from normal practice and an outrageous attempt to obtain Squibb trade secrets. Mr. McLean advised Squibb to direct Bristol to renegotiate the matter with Pfizer and suggested two arguments for use in that connection: (1) that Pfizer's insistence on a departure from the ordinary method of royalty reporting would establish a new pattern to which Pfizer would be subject in the event that it ever solicited a license from Squibb and (2) that in the course of the then current Justice Department investigation of tetracycline pricing (see Proposed Finding 71, infra), the detailed reporting of deductions from gross sales might be misconstrued as "one item in an antitrust situation". When Bristol's lack of success in advancing such arguments was conveyed to Mr. McLean, he himself discussed the matter with Pfizer's general counsel and convinced the latter of the

advisability of a simplified form. Consequently, the only material that has ever been reported are the standard items, dollars and quantity, of net sales.

64. Mr. McLean also raised another point--the computation of royalties on sales of combination products-- for Bristol to contest with Pfizer in subsequent negotiations. A problem which requently develops in patent license agreements is the method of determining, for royalty purposes, the part of the sales price of a combination product (containing licensed and non-licensed components) which is to be allocated to the licensed ingredient. In the drafts prepared by Pfizer attorneys, royalties on combination products were to be calculated by multiplying the number of kilograms of all tetracycline sold in combination form and the average sales price per kilogram of all

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tetracycline sold in non-combination products. Squibb proposed, on the other hand, that the average price of capsules (which product form was sold for a lower price per kilogram than any other tetracycline item) should be used in the determination of combination product royalties. But since Pfizer naturally recognized that the exclusion of the higher priced forms (e.g., pediatric drops, injectibles and ointments) would reduce its royalties on combination products, Mr. Schwartz had no success in selling the Squibb proposal to Mr. McKeen.

In rationalizing his failure in that regard, Mr. Schwartz explained that averaging the prices of noncapsule items in the royalty base for combination products would make little difference in the long run because capsules would undoubtedly comprise the vast preponderance of all

tetracycline sales.

65. Final settlement papers were formally executed by Pfizer, Bristol, Upjohn and Squibb on March 28, 1956. The settlement agreement, signed by all parties to the litigation, contained the usual provisions for the discontinuance of pending actions and for the cross-release of opposing parties from all causes of action arising from the beginning of time to the date of the agreement. In addition, the license that Squibb obtained from Pfizer as part of the settlement was incorporated by reference into the covering agreement.

66. (a) Under the Pfizer-Bristol license, Bristol received, among other things, a non-exclusive right to make, compound, use and sell tetracycline and agreed to pay royalties at a rate of 3-1/2% on its own net sales of tetracycline and on

those of its bulk customers. In a separate agreement between Bristol and Squibb, executed contemporaneously with the settlement and in accordance with the Bristol-Squibb agreement of November 18, 1955, Squibb agreed to remit to Bristol one half of the royalties that Bristol was obligated under its license to pay to Pfizer with respect to Squibb sales containing tetracycline purchased in bulk from Bristol.

(b) Until 1966, all of the tetracycline products sold by Squibb in the United States contained bulk tetracycline purchased from Bristol. Thus, through December 31, 1965, Squibb remitted to Bristol one half of the royalties that Bristol owed to Pfizer with respect to Squibb's domestic sales of tetracycline.

67. As a condition to its acceptance of settlement of the litigation,

Squibb demanded and obtained a nonexclusive right to purchase, compound and use tetracycline and to sell the same in therapeutic form to the drug trade. Squibb's demand for, and acceptance of, that license (for which provision was made under its agreement with Bristol of November 18, 1955) made it unnecessary, after its requirements contract with Bristol had terminated, for Squibb to rely on the continuation of the Pfizer-Bristol license, on Bristol's continued interest in supplying bulk tetracycline to Squibb or on Squibb's continued satisfaction with the bulk sale relationship. If, for example, Bristol were to violate the terms of its license with Pfizer, any tetracycline purchased from Bristol could not be resold by Squibb (absent its own license) without infringing the Conover patent. Moreover, in the event that Bristol discontinued the

production of tetracycline (either because of the cancelation of its license or because of economic considerations) or in any way failed to accommodate Squibb's interests (after the requirements contract had terminated), Squibb would have been free, under its own license, to purchase tetracycline from any non-licensed source outside of the United States or to manufacture its own tetracycline abroad and import it into the United States. As long as Bristol remained licensed to manufacture and sell tetracycline, the Squibb license from Pfizer did not apply, nor was it intended to apply, to any tetracycline purchased by Squibb from Bristol. Accordingly, Squibb did not exercise the rights granted it under the license from Pfizer and did not pay royalties under that license until January 1, 1966, when it commenced to satisfy its domestic

requirements of tetracycline with the material fermented and refined in Squibb overseas locations.

68. In sum, settlement of the infringement litigation on what was an unexpectedly satisfactory basis enabled Squibb to avert the very real danger of losing that litigation and of being forced out of the tetracycline market during a period in which its Mysteclin sales were continuously expanding. On balance, Squibb was delighted to accept the settlement terms; under an objective standard it was, by virtue of its November 18, 1955, agreement with Bristol, legally obligated to do so.

69. The final settlement papers expressed the entire agreement between the parties. There were no agreements, tacit or otherwise, or even discussions during the final conference or during any

settlement negotiations concerning any matter relating to resale prices of tetracycline or limitation of the broad spectrum market.

70. Immediately after settlement of the litigation Squibb, together with Bristol and Upjohn, filed in the Southern District all of the depositions that had been conducted up to that point and thus made all evidence elicited with respect to the background of the prosecution of the Conover patent a matter of public record. That action represented a departure from the standard practice of waiving the filing of depositions and was totally inconsistent with any charge that Squibb "knew" the patent to be invalid or intended to conceal information concerning its validity.

71. During the course of the infringement litigation and at the time of settlement, Squibb was fully aware that

both the Federal Trade Commission and the Department of Justice were investigating all phases of the broad spectrum antibiotic industry (including price, patents, production, distribution and marketing). In fact, Squibb counsel, Mr. McLean, was called to Washington to confer with members of the Justice Department with respect to its investigation and, upon that occasion, delivered for study a copy of the pleadings in the infringement litigation.

72. The license obtained by Squibb from Pfizer in connection with settlement of the infringement litigation was not taken by Squibb with knowledge that the Conover patent was in any respect or for any reason invalid.

THE COMMERCIAL CASE AGAINST SQUIBB

The Introduction of Tetracycline

73. (a) The introduction of tetracycline, heralded by Squibb management as "the biggest news in Squibb history" (NCX 813), launched Squibb into a market which it recognized to be "an intensely competitive area" (NCX 952). The broad spectrum products of Cyanamid (Aureomycin and Achromycin), Pfizer (Terramycin and Tetracyn), Bristol (Polycycline) and Parke, Davis (Chloromycetin) had been sold for a considerable period of time prior to the introduction of Steclin on September 17, 1954, and, therefore, were already familiar to the medical profession. Achromycin, the first brand of tetracycline introduced, was particularly well entrenched in the broad spectrum market. Moreover, Steclin encountered some competition from such middle spectrum antibiotics as Lilly's

Ilotycin. The head start enjoyed by those companies occasioned even greater sales resistance to Squibb's plain tetracycline than had been anticipated, and Squibb early acknowledged that, despite the reputation of its label, such resistance was going to be difficult to overcome.

(b) For example, reports from the field indicated that "doctors . . . received [Steclin] with an attitude of almost complete indifference" (SX 97) and that the "reaction from Physician, Retail Druggist and Institutions . . . [varied] from open hostility to the 'so what' idea" (SX 99). Another initial reaction of pharmacies was that stocking Steclin necessitated " a duplication of inventory " (SX 99). Squibb soon realized that "physicians generally are somewhat indifferent to our introduction of Steclin. They say, 'Oh, another Achromycin' and lose

interest" (NCX 816). It was also admitted by Squibb that "the doctor who is satisfied with Achromycin can only be brought to use Steclin through personal influence . . . and by the use of samples" (NCX 817).

74. Recognizing that considerable promotion of Steclin was essential, Squibb undertook such a program on a scale unprecedented in the history of the company. In the view of management and field, the only means by which Squibb could hope to capture a significant part of the expanding demand for tetracycline from the more established brands was through extensive detailing, direct mailing, journal advertising and the distribution of professional samples. Noting that the "job of promoting Steclin [was] going to be much harder than . . . expected" (NCX 816), the Director of Advertising and Marketing suggested the distribution of 100,000

sample packages per month at a monthly cost of $780,000. Moreover, Squibb management emphasized that "our promotion group, as well as the field staff, will need all the strength we can give them" (NCX 952).

75. (a) The high cost to Squibb of bulk purchasing and of promotion occasioned a relatively poor profit position in tetracycline--a fact which significantly influenced Squibb's pricing policies in the broad spectrum market. At the initial bulk price of $1,000 per kilogram, the price at which Squibb sold tetracycline to the trade returned approximately the cost of the raw material. Costs not covered by resale prices included such direct and allocated items as processing, packaging, labor, warehousing, selling, distribution, promotion, research and general administrative overhead. At bulk prices of $500, $400 and $350 a

kilogram, the profit picture on tetracycline products naturally improved--but Squibb's cost position necessarily remained far inferior to the cost positions of companies that manufactured their own broad spectrum products. As Squibb determined its pricing policies for tetracycline, it was aware (using profit or loss as a percentage of sales and including the necessary allocations) that in 1954 its loss on Steclin was roughly 27%; that in 1955 its combined loss on Steclin and Mysteclin was 4.1%; that in 1956 its combined profit on Steclin and Mysteclin was 6.7%; that in 1957 its loss was roughly 6% on Steclin and Sumycin while profit on Mysteclin was approximately 9%; and that between September 16, 1954, and December 31, 1957, its over-all profit on tetracycline-containing products was 4.1%.

(b) Thus, Squibb was forced at all time to adhere to a comparatively rigid price so as to avoid the predictable retailiation of companies better able to withstand lower price levels. Moreover, during the course of the infringement litigation with Pfizer, the threat of treble damages (which Squibb had been advised were recoverable in patent infringement cases for losses sustained by reason of an infringer's depression of market prices) constituted an additional reason for the maintenance by Squibb of a policy that permitted little deviation from, or variation of, its established prices. The record demonstrates clearly that that policy was fashioned independently out of economic necessity and that it was in no way part of a conspiratorial scheme.

General Marketing Policies

Dosage Forms and Package Sizes

76. The dosage forms and package sizes of Steclin first introduced by Squibb were 50 mg. and 100 mg. capsules, both potencies in bottles of 25's and 100's, and 250 mg. capsules in bottles of 16's and 100's. Capsules were originally chosen because that form then comprised the largest share of the broad spectrum business. Those particular strengths and package sizes were selected because they were the prevailing potencies and sizes in which broad spectrum products were offered. Squibb observed the market pattern in an effort to avoid the type of confusion that would inevitably occur were doctors and pharmacists asked to remember aberrational dosage forms and sizes in addition to a new brand name.

77. After the introduction of

capsules, Squibb endeavored as rapidly as possible to offer many of the other accepted forms of tetracycline. The recognized necessity of marketing a complete line was underscored by correspondence from the field pointing out that "[w]ith physicians the usual reaction is . . . why should I remember Steclin when you don't have a complete line" (SX 99) and by other reports relating to doctors' requests for additional product forms. Accordingly, in 1955 Squibb introduced suspensions and syrups, pediatric drops and intramuscular and intravenous forms--again, in strengths and sizes already accepted by the medical profession.

78. Squibb thinking with respect to its specialty Mysteclin was at the outset somewhat different. In that regard the record shows that Squibb thought that it might derive some advantage in departing

from the existing pattern-- and this it did by simplifying the potency arrangement and by introducing a half-strength (125 mg.) Mysteclin capsule instead of using the 100 mg. capsule (which was the prevailing strength in the less-than-full-strength category).

Squibb also marketed bottles of 12's instead of the traditional 16's, speculating that a three-day supply of Mysteclin capsules rather than the typical four-day dosage (to which bottles of 16's were related) mgiht prove sufficient. That departure, however, caused such confusion and resistance from doctors, who were accustomed to prescribing a four-day supply, that Squibb, on the urging of its field staff, abandoned the bottle of 12's and reverted to the established-sized bottle. It did not, however, eliminate the half-strength dosage form.

79. (a) There is nothing unusual about the fact that the dosage forms and package sizes of tetracycline marketed by Squibb were generally the same as those sold by its competitors. Any divergence from the market pattern would have entailed disproportionately heavy promotional efforts to overcome physicians' acceptance of existing sizes, strengths and forms. For that reason, most generic products sold by Squibb (e.g., aspirin, penicillin) are offered in dosage forms and package sizes that conform with the competitive pattern. Indeed, identical forms, sizes and strengths are as traditional in ethical drugs as are, for example, package sizes in the cigarette industry and alcoholic content and container sizes in the strong dring field.

(b) The record is clear that there was no agreement, understanding or

discussion between Squibb and any other defendant concerning dosage forms and package sizes.

Classification of customers

80. Customers of drug manufacturers traditionally have bee n classified according to the functions they perform so that accounts similarly situated can be treated alike from the standpoint of terms of sale and other services. The major categories of accounts include retail pharmacists, wholesalers, private hospitals, city, county and state (hereinafter referred to as CCS) hospitals and the various Federal Government accounts, with the largest number falling readily (and without any substantial possibility of misclassification) into the first-mentioned group. Squibb had been classifying customers in accordance with those categories long prior to the advent of

tetracycline, some distinctions (e.g., that between CCS and private hospitals) having existed for the better part of a half century. The current classification schedule has been in force virtually without change for twenty years. Minor revisions have been made, but none of those revisions was occasioned in any respect by the introduction or sale of tetracycline. Indeed, the nature of any drug (with the exception of veterinary forms) is irrelevant to the designation of an account--a classification, once made, relates to all products.

81. Approximately 90% of the hospitals to which Squibb sold tetracycline between September of 1954 and July of 1958 were customers which had already been classified by Squibb prior to that period. The procedure employed for determining the classification of new hospital customers

did not undergo any changes as a result of Squibb's introduction of a tetracycline product. As before, new accounts were generally classified, at the time opened, by the branch credit department. In most instances the opening order, if taken by salesmen, would contain a new account record or questionnaire indicating the category in which the customer was properly identified. When a hospital transmitted an opening order by mail, the letterhead would normally describe the nature of the institution and its ownership. In questionable cases Squibb would refer primarily to the Directory of Hospitals and Sanitariums. It might also refer as a guide to such other sources as the Modern Hospital Directory or the American Hospital Directory, which were recognized to be generally reliable. For Squibb to have decided every doubtful case on its own

(without reference to publicly available information) would have been both impracticable and inadvisable--for example, because of the ill will that would have been caused by the necessity of making fine distinctions.

82. In very few cases after the introduction of tetracycline did Squibb reclassify a hospital. Some of those cases were instances in which the inevitable error had been made and required correction. Others were those in which Squibb attempted to meet a competitive situation.

83. Various reports from Squibb field representatives indicated that other defendants from time to time reclassified hospitals for the purpose of offering them lower price schedules. Ordinarily, Squibb responded to reports of that nature in such

typical language as "We can only hope one of these days that competition will come to classify hospitals on the same basis" (SX 320) and refused to take action. In those cases where Squibb even considered altering its classification of a private hospital, it insisted that its salesmen verify beyond question that competitors were offering to that hospital the prices applicable to the proposed classification. In other instances, Squibb reacted to a verified report that competitors had reclassified a hospital and were quoting lower prices on tetracycline products by meeting those prices without reclassifying the institution itself (see also Proposed Finding 84, infra).

84. But even authenticated reports seldom induced Squibb to meet competitors' reclassifications. It s hesitancy in that regard was based on a

sound appreciation of the problems inherent in such action, for the classification of a particular hospital determines the price at which that institution must be sold all pharmaceutical items--in Squibb's case 175 different products. Moreover, with the number of customers and competitors in each product line, total chaos would result if Squibb reacted to every divergent competitive classification. Finally, Squibb's re-designation of one hospital would have been likely to engender the ill will of those hospitals whose classifications were not similarly revised. And Squibb's ability to compete in the reclassified hospital might have been far outweighed by its inability to sell such less favored institutions.

85. The record is clear that there was no agreement, understanding or discussion between Squibb and any other

defendant with respect to the classification of customers.

Discount structures

86. Squibb's discount structure in respect of various customer classifications had been in effect for many years prior to its introduction of tetracycline. All customer discounts are (and were) computed in the following manner from a figure which is termed "regular price" (the consumer list price suggested to retailers). The price to retail pharmacists (trade price), which also applies to private hospitals, is calculated at a discount of 40% from the regular price. CCS hospitals generally receive a discount of 40% plus 16-2/3% from regular price, and Federal Government accounts generally receive an additional 5% off the CCS price. Those discounts apply alike to the ethical drug line marketed

competitively by Squibb and, with the exception of the wholesaler discount, are as traditional in the drug industry as customer classifications.

87. (a) Wholesaler discounts differ among drug companies in general and among defendants in particular. In contrast to Squibb's discount of 16%, Cyanamid offered wholesalers 16-2/3% from the trade price. An extra discount of 5% was available to Cyanamid wholesalers that executed the Promotional Supplement to the Lederle Wholesale Distributor Agreement. Between January 15, 1954, and April 13, 1954, Pfizer gave wholesalers a discount of 20% from the trade price. After April 13, 1954, that discount was changed to 16-2/3% plus 5%. Between April 30, 1954, and May 13, 1954, the Bristol discount to wholesalers was 20%, which was changed to 16-2/3% plus 5%, effective May 14, 1954.

Upjohn del credere agents received a discount of 15% from their suggested resale prices to retailers--a discount structure which resulted in prices higher than any of the different prices paid by wholesalers of other defendants.

(b) Moreover, while all the defendants originally applied their traditional discounts to hospital transactions, the effective prices to private, CCS and Federal institutions often varied and steadily declined (for reasons that will be developed below). The record is clear that discount structures were not the subject of any agreemnt, understanding or discussion between Squibb and any other defendant.

Price lists

88. Price lists covering every dosage form and package size of all of its products are regularly circulated by Squibb

to each customer and field representative of the company. Such lists contain regular prices and prices to particular categories of accounts. The basic price list for the retail trade, the wholesaler, the private hospital supplement and the CCS supplement are circulated quarterly. The Federal schedule is issued once a year on the basis of the general supply contract between Squibb and the General Services Administration.

89. Price lists perform the essential function of apprising customers of prices, price changes and the addition or deletion of products. Over a period of years, Squibb has experimented with notifications of various kinds conveyed through the mail or by salesmen. The quarterly publication of price lists has proven to be the most efficient method of accomplishing the desired purpose--each

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other method was regarded as a "hopeless task" (Tr. 1190).

90. (a) The number of price lists distributed each quarter by Squibb totals approximately 75,000. Since other major drug houses, including defendants, circulate a similarly large number of price lists at various intervals, the price schedule for any pharmaceutical product is readily available to the field staff of any company. For example, Squibb employs about 750 salesmen, each of whom can gain easy access to competitive lists at any one of the number of accounts with which he has established friendly relations. A change in a competitor's price schedule is particularly easy to detect and is usually phoned in to the home office within several hours after its announcement. For in that case, the retail or hospital pharmacist is eager--indeed, is on the lookout for the

Squibb salesmen--to inform him of a competitive change, which would invariably occasion an equivalent Squibb price on future orders and a shelf-stock adjustment on current inventory.

(b) Several other sources of price information are publicly available. The Red Book and the Blue Book contain the price catalogs of the industry, and interim price changes are published in the trade press.

91. In addition to notifying Squibb's customers of price and product information, price lists serve a necessary function in the internal pricing operations of the company. For example, there are thousands of transactions effected every year on each product, so that Squibb management can keep continuously under review only general levels of price or bid invitations of significant volume. Under

those circumstances price lists are essential for the routine use of salesmen and branch offices in quoting prices on small volume transactions.

92. (a) However, neither traditional discounts from the regular price nor quarterly price lists represented the entire--or, indeed, the actual--range of prices offered by Squibb on its tetracycline products. For example, after numerous reports from the field would have established without question that competitors were offering lower (off-schedule) prices, Squibb might attempt to meet that competition by authorizing generally effective prices, which were not formalized by a revision of price schedules but which were usable by the field on direct bids under certain general conditions (e.g., if the field were certain of prior competitive use of the price and

where the order being sought called for certain minimum quantity requirements). Moreover, a lower price might be specially authorized by Squibb in an effort to meet prior competitive bids on a proposed order of particularly large volume.

(b) The process by which list prices were reduced to the level of generally effective prices, special prices became the generally effective price and new prices were formulated for special situation reflected the price deterioration that occurred in the hospital markets. Thus, in the context of this case, the term "price" must be defined in at least four different ways: (i) prices computed on the basis of traditional discounts from the regular price; (ii) prices announced in price lists (which at first were identical with (i) but which later--for example, in the case of CCS and Federal Government

price lists--were revised to reflect competitive price reductions); (iii) generally effective prices (prices which were offschedule and effective under certain defined conditions); and (iv) special prices (again, offschedule prices--but ones that were offered on an isolated basis in order to meet competition for significant orders).

Quantity prices

TCH schedule

93. As opposed to the general circulation given its price lists (i.e., to salemen and to customers), Squibb issued to its salesmen a special tablet and capsule schedule (TCH) which provided quantity prices to retailers who purchased in sufficient volume to fulfill certain annual and individual minimum order requirements. For example, one yearly minimum was 100,000 capsules or tables, which carried with it

an individual purchase order requirement of 10,000. Thus, orders totaling 10,000 capsules or tablets of products listed in the schedule qualified for TCH benefits if the customer's yearly purchases of such products equaled or exceeded 100,000 capsules or tablets. Quantity discounts could be realized directly on certain products ; others (tetracycline and several more) could be used to build up per order and yearly minimums. Accordingly, indirect discounts were earned, in effect, on tetracycline if individual or yearly orders of included products would not have exceeded quantity requirements without the purchase of tetracycline capsules.

94. The Squibb decision to exclude tetracycline from direct discount benefits under the TCH schedule and from other quantity terms applicable to certain other products on a list basis was governed

by sound business considerations. With respect to all classifications of accounts, Squibb's cost position on tetracycline products was too high to permit any price concession which was not absolutely necessary from a competitive standpoint. Since other companies in the market did not offer direct quantity discounts on broad spectrum products, there was no competitive pressure on Squibb, when it ultimately introduced the product, to add such an arragement to its pricing structure. Moreover, there was no commercial advantage to be gained from making quantity prices available to retail druggists or to small hospitals. Tetracycline is a relatively expensive drug, which becomes outdated if unsold, and a bottle of 100 capsules constitutes normal inventory for the average size pharmacy. Indeed, orders significantly in excess of that quantity

would have been rejected by Squibb in order to avoid the necessity of refunding payments on unused merchandise (consistent with its policy on return goods). And since Squibb was a bulk purchaser, it could not as a practical matter realize production economies in any true sense of the term, no matter what the size of the order--only the more limited economies of distribution on large volume transactions. It would, therefore, have been just as pointless to offer such accounts the discount benefits (i.e., cost savings) that would result from quantity purchases of which they could not take advantage as it would have been pointless (also, perhaps, illegal) for Squibb to give discount benefits on quantity requirements which would not be justified in terms of cost savings to Squibb.

95. On the other hand, Squibb did

upon occasion give effective quantity discounts to large volume institutional purchasers in order to meet the competitive pattern. Its departures from schedule and generally effective prices were conditioned, at least initially, on minimum order requirements and resulted, eventually, in price levels which were far below those computed in accordance with traditional discount structures. Furthermore, in attempting to meet competitive bids, Squibb frequently submitted lower quotations to large hospital buyers than to small accounts in the same classification.

Squibb Plan

96. The Squibb Plan is an arrangement that has existed since 1929 between Squibb and its direct buying retail accounts, approximately 20,000 of which

participated in the Plan during the period between September of 1954 and July of 1958. Retail pharmacists who executed the Squibb Plan Franchise agreed to stock and to promote the sale of Squibb products by various means specified in the agreement, for which Squibb agreed to grant the following profitsharing compensation: "incentive" (typically, an amount equal to 5% of a druggist's yearly purchases of certain Squibb products) and "additional incentive" (typically, an amount equal to 5% of the increase of a druggist's total purchases of Squibb products for the current year over his "base", which was stated to be the average of the two preceding years' purchases). Consistent with the pattern adopted by Squibb in respect of other antibiotics, tetracycline was not made available for "incentive" compensation. Another Squibb product

excluded from "incentive" compensation was insulin. On the other hand, tetracycline purchases, like those of all Squibb products, were included in the computation of "additional incentive" payments.

97. Offering Squibb Plan benefits on tetracycline gave Squibb an obvious selling weapon in the broad spectrum market, for the following reasons. The Squibb Plan was designed to insure adequate stocking by retailers of Squibb products. That function, important in general, was particularly significant with respect to a drug marketed by Squibb the generic equivalent of which was marketed as well by other companies in the industry. For while druggists are generally unable to influence physicians' prescriptions in a positive way, they can in a negative fashion influence his choice between substantially

identical drugs, simply by failing adequately to stock one such drug and obtaining his consent for the substitution of another. The risk of understocking in respect of Squibb tetracycline was effectively minimized by the Squibb Plan and by Squibb salesmen who reminded druggists nearing "base" (but wary of tying up capital in Steclin inventory) that banks paid 3-1/2% while Squibb offered 5%. Thus, unlike a quantity discount on tetracycline (which, in order for it to have been Squibb cost-justified, would have required a purchase by the druggist far in excess of his foreseeable needs), payments under the Squibb Plan provided realistic savings for druggists and, accordingly, a competitive advantage for Squibb. Recognizing, however, that extensive promotion of that advantage might occasion retaliatory pricing by competitors, Squibb cautioned

its staff to use proper discretion.

98. No eguivalent plan was offered by other defendants with respect to their brands of tetracycline. Under the Lederle Purchase Plan, effective discounts could be earned by retailers on tetracycline in cases where individual orders would not have totaled $50 or $100 without the purchase of Cyanamid tetracycline products. Similarly, a Bristol plan provided effective discounts on tetracycline when the individual orders of druggists would not have met a $25, $50, or $100 minimum without the purchase of Polycycline or Tetrex. Due to the variant operations of the three plans, the general superiority of any one would be difficult to determine since comparative benefits would depend upon the circumstances surrounding any particular transaction. On

the other hand, a significant fact is apparent: the plans caused differences among the effective tetracycline prices of Cyanamid, Bristol and Squibb and also differentiated their prices from those of other defendants.

Delivered pricing

99. (a) Squibb sets the prices of all its products, including tetracycline, on a delivered basis since the goods shipped normally have little weight in relation to their value and, therefore, freight amounts to a relatively minor part of the cost. A transportation fee was, however, charged by Squibb on orders under $10, for the purpose of encouraging customers to buy in quantities sufficient, at least, to cover the cost of delivery.

(b) Delivered pricing is traditional in the drug industry and had been followed by Squibb long before the introduction of tetracycline. When tetracycline was introduced by Squibb, it was handled in no way different from any other Squibb product.

Field reports

100. The only means by which Squibb obtained information in respect of competitive prices (other than schedule prices) and practices in the broad spectrum market was through the reports of its field representatives. Such information was essential to Squibb for purposes of keeping informed of, and (to the extent that in certain instances it was economically feasible) keeping pace with, the ever-changing price pattern in the market. It was vital intelligence, which served as a

basis for the continuing analysis of competitive trands, the formulation of general pricing policies and the decisions to meet specific instances of reported competition. Evidence of record demonstrates numerous situations in which, for example, Squibb's reduction of price schedules or generally effective prices, its retaliation in special situations through direct bidding, its use of dealers or the distribution of free goods, and its reclassification of hospitals (to the very limited extent that such was done), were predicated on field reports with respect to competitive activities.

101. Squibb has been receiving field reports for as long as it has had salesmen, particularly with respect to products, of which tetracycline is an example, in which the volume is large and the competition intense. The responsi-

bility for reporting competitive information is made a specific part of each salesman's work instructions. But more than that, salesmen have an individual interest in fulfilling that requirement, for they cannot obtain authorization to meet a lower price (and thus, if Squibb receives the award, earn their commission on the sale) unless they first communicate the competitive activity to the home office. Moreover, because of the vigorously competitive nature of the broad spectrum market, Squibb constantly solicited its field staff for reports of competitive activities. Illustrative of those requests are the following:

> "Please keep sending your reports in to me as we certainly want to be up to the moment on what competition is doing when quoting on this important product." SX 5|.

> "Please make every reasonable effort to get cometitive price

> information on bids for Steclin products. We can not be sure we are keeping up with competition unless we know what is going on." SX |63

> "It is extremely important that we be kept abreast of the current condition of the antibiotic price market.
>
> " . . .
>
> "We urge you to give us a written report immediately-- list specific cases, price quoted, competition and when quoted.
>
> ". . .
>
> "This in no way changes the current picture of our price schedule but such information will help your House in future decisions." SX 220.

|02. The numerous customers in every classification with which Squibb salesmen transacted business each day constituted the primary sources of competitive information. Friendly accounts would inform Squibb representatives of the terms of sale, offers of special deals and general statements made by the salesmen of

competing firms. Frequently, Squibb men would be shown, or in some manner gain access to, records, invoices or requisition pads and thus discover the terms quoted by competition. In informal bid arrangements, such as those conducted by private hospitals, the latest offers on competitive products would be ascertained in negotiation with purchasing agents or through friendly relations with other members of hospital staffs. The results of formal bids to tax-supported institutions were generally made available to the public under requirement of statutes and ordinances to that effect. Additional sources of information were the numerous price lists circulated by competitors and, occasionally, the chance comments of competitors' salesmen.

103. Upon the receipt of competitive information about tetracycline

or any other drug, the Squibb salesman would prepare a report, which could take one of any number of forms, and forward it to his immediate superior (district, regional or branch manager) or directly to the home office. Reports would be transmitted on salesman or field manager stationery, on standard reporting forms and, sometimes, by telegraph, teletype or night wire. The telephone, another common method of conveying competitive information, was used frequently by Squibb representatives in larger cities and normally by all Squibb salesmen when a speed element was involved, e.g., a request for authorization to meet a lower price on important business. A competitor's announcement of a new or revised price schedule was invariably communicated by telephone to the marketing department in New York as soon as it was discovered in

the field and (if the new schedule were lower) was met immediately by a Squibb announcement as a matter of routine basic operating procedure. As reports were transmitted directly or indirectly to the marketing department at Squibb, they were compiled for the use of top level management.

104. (a) Whether the information contained in the field reports received by Squibb was used as a basis for meeting competition depended in large part on mangement's evaluation of such reports. Squibb's cost position in the broad spectrum market, as well as the other economic considerations hereinafter considered (see Proposed Findings 105 et. seq., infra), forced it generally to refrain from offering prices in any form (whether, for example, by direct bid, free goods or handling allowance) which did more

than meet the then prevailing competitive level. Thus, Squibb's reaction to reported practices could be premised on only "factual" (e.g., NCX 372), "authenticated" (e.g., NCX 828) and "documented" (e.g., NCX 818) information, i.e., facts verified beyond question by actual observation and, where possible, by the transmittal of invoices or other records of the competitive transaction. Typical of the precautions taken in that regard is such correspondence as SX 125:

> "We have had no reports of a similar nature from any other parts of the country but frequently we know that such national policies are tried out in one area before a national policy is adopted.
>
> "We would like to be sure we know what Upjohn is doing so that counter measures can be adopted. Naturally, in a matter as important as this we want to get real authenticated information."

and SX 171:

> "Naturally, I assume Ed Martin's report of this price has been verified beyond

question. We should not be tricked into meeting a price which is just a purchasing agent's dream. Please make this very clear to Ed Martin before you authorize this price. Be absolutely sure the reported competitive price is authentic in order to justify our meeting it."

(b) Reports were also carefully evaluated in an effort to determine the possible extensiveness of reported practices and the likelihood of their repetition. For example, a stream of individual reports about a pricing practice of a competitor, covering an appreciable period of time and a substantial geographic area, was considered to be an accurate reflection of such competitor's national policy and sometimes caused Squibb to revise its pricing policies accordingly. On the other hand, Squibb rarely, if ever, acted on the basis of an isolated report. Depending upon the circumstances, such information would be viewed as indicating the unauthorized act of an individual field

manager or salesman (e.g., SX 232, 307), in which case the price would probably not be repeated, or as company policy confined to a local area or specific customer (e.g., SX 125), in which case subsequent reports might induce Squibb to adopt competitive measures. Of course, isolated reports from the field which recounted extraordinary practices were generally disregarded if not supported by subsequent communications (e.g., NCX 368). When a report appeared to be inaccurate in any way, Squibb would ordinarily ask its representative to recheck the source (e.g., NCX 947), and, with respect to correspondence presenting an incomplete picture of a competitive transaction, Squibb would usually request more information (e.g., NCX 826, 949; SX 319).

Pricing policies and practices

Nature of the prescription market

105. The market in which ethical drugs are sold by pharmaceutical companies to retail pharmacists and wholesale customers is defined as the prescription market because of its principal characteristic: the physician, through prescriptions, dictates the demand of the ultimate consumer (the patient). Physicians generally prescribe broad spectrum products by brand name. Pharmacists are prohibited as much by business ethics as by statute from substituting a brand different from the one prescribed without prior authorization from the prescribing physician. Thus, the demand for any particular drug in the prescription market is governed by the extent to which the drug has been made known to, and accepted by, the medical profession, by the incidence of diseases

for which the drug is indicated and, in the final analysis, by the doctors' prescriptions.

106. For that reason, Squibb (as did others) endeavored to make its brand of broad spectrum antibiotics familiar to the medical profession. A principal approach was through its detailmen or professional service representatives, who presented to doctors all medical facts relevant to the product, e.g., therapeutic efficacy, pharmacology, chemistry and dosage scheduling. Physicians were also given by the Squibb detailmen, and received from Squibb through direct mailing, such literature as clinical reports (by the Squibb Institute for Medical Research or by others), product brochures and new product briefs, in which all pertinent data were given. In addition, Squibb placed advertisements in medical journals, and

sample packages of its tetracycline products were distributed to doctors by mail and by its professional service representatives. The function of samples was physically to identify the drug in the doctor's mind and to permit him to evaluate it clinically in connection with the treatment of patients. Samples were particularly effective in the promotion by brand name of a drug marketed by more than one company, such as tetracycline, because when given to patients as starter doses, follow-up prescriptions were ordinarily written for the same brand.

107. In choosing between various therapeutic agents, a doctor will be guided by his opinion of the best drug for the treatment of his patient's illness. Once that determination has been made, the price of the drug is generally not a consideration. However, in choosing

between various brand names of essentially the same drug, price differentials between those brands will, in many cases, influence the doctor's selection.

108. The function of the retail drugstore in the prescription market is principally that of an educated "storearm" of the doctor, and the pharmacist is detailed accordingly. It is necessary for drug companies to acquaint pharmacists with such matters as storage requirements (refrigeration and the like), packaging (the package sizes in which the drug is marketed), prices and the category of pharmaceutical products with which the drug is identified. Neither the technical education (e.g., pharmacology, chemistry) nor the promotional efforts addressed to physicians were normally directed by Squibb to retail druggists in respect of its broad

spectrum antibiotics.

109. There are many thousands of retail drugstores in the United States. Each store bought tetracycline in relatively small quantities, the typical inventory of, for example, Steclin capsules being one bottle of 250 mg. 100's.

Sales of broad spectrum antibiotics to retail pharmacists were not final in a commercial sense since, under the return-goods policy of Squibb, ethical drugs could be returned to Squibb for full credit if not sold prior to their expiration dates. Moreover, the relationship between the pharmacists and the doctor was not such that the pharmacist generally could do much to promote, in an affirmative way, the sale of, for example, Squibb tetracyline products over those of another company. On the other hand, it was essential that Squibb insure the adequate stocking by

retailers of Squibb tetracycline so that druggists would not be motivated to request the consent of the prescribing doctor to the substitution of a competitor's product.

Squibb pricing policy in the prescription market

110. Squibb introduced tetracycline in September of 1954 at the same price to retailers as competitors were offering their broad spectrum antibiotics, e.g., $5.10 for a bottle of 16 250 mg. capsules and $30.60 for a bottle of 100 250 mg. capsules. Such prices had been in effect in the broad spectrum market since 1951. Although Squibb's cost position would have justified higher prices at that time and thereafter, Squibb considered it impractical to price Steclin above the competitive level--for Steclin afforded no therapeutic advantage over the more established brands of tetracycline and,

offered at a higher price, would have been virtually impossible to sell.

III. (a) Nor would it have been rational for Squibb to have introduced Steclin at prices lower than those charged by competitors or subsequently to have initiated a reduction in the market price. Squibb believed, and the record clearly shows, that any price reduction on Steclin would have had the completely self-defeating effect of commensurately reducing total revenues.

(b) Squibb knew from its experience in other product markets that its field staff promptly discovered, and brought to the attention of Squibb within a very few hours after initial announcement, any general price reduction made by a competitor. Squibb also knew that its competitors in the broad spectrum market maintained comparable reporting systems and

believed that they would promptly detect any Squibb reduction in the price of tetracycline.

(c) Moreover, Squibb realized that its broad spectrum competitors would be forced to match any Squibb reduction as quickly as they discovered it, so as to prevent a relatively weak competitor in the tetracycline market from enhancing its position at their expense, through the maintenance of a price advantage. Squibb entertained no doubt at all about the ability of its competitors to match any reduction by Squibb, for the prime manufacturers (Pfizer, Cyanamid and Bristol) obviously enjoyed far more favorable cost positions and the Upjohn position was certainly no worse than the Squibb position. Evidence of record fully supports the judgment upon which Squibb based its pricing policy, i.e. that it was

the basic policy of its competitors immediately to match any competitive price reduction.

112. Furthermore, experience in the drug industry in general and the prior history of broad spectrum antibiotic pricing in particular had taught that price reductions by one company occasioned retaliation by others where products were identical or closely related. For example, Cyanamid introduced Aureomycin in December of 1948 at a price to retailers of $15 per bottle of 16 250 mg. capsules. On February 1, 1949, Cyanamid reduced that price to $10, and on March 1, 1949, Parke Davis introduced Chloromycetin in bottles of 16 250 mg. capsules at the same price. On February 1, 1950, Cyanamid lowered the price to $8 and, on the same day, Parke Davis matched that reduction. On April 1, 1950, Pfizer introduced Terramycin, 250 mg.

capsules, bottles of 16's at $8.40. On May 1, 1950, Parke Davis reduced the price from $8 to $6, Pfizer and Cyanamid retaliating on the same day. Finally, on September 27, 1951, Pfizer reduced the price to $5.10, and Cyanamid and Parke Davis followed suit. The price war in penicillin and a history of retaliatory pricing with respect to other products marketed by more than one company also demonstrated that competitors would match any further price reduction in broad spectrum antibiotics.

113. Squibb recognized that such inevitable competitive retaliation against any price reduction on its part would have caused a general industry contraction in price without increasing Squibb's share of the market. Indeed, the predictable speed with which competitors would have matched any Squibb price cut would have precluded

even a temporary advantage.

||4. Nor did Squibb believe that the use of broad spectrum antibiotics would have been enlarged by lower price levels. A doctor's selection of any drug is dictated by his evaluation of the efficacy of the product for the treatment of the disease, not by the price of the product to the patient. Consequently, the demand for a drug like tetracycline, particularly by September of |954, was relatively inelastic (i.e., a decrease in price would not have increased sales sufficiently to compensate for the loss in revenues). That conclusion was particularly applicable to broad spectrum antibiotics, the therapeutic advantages of which had been esteemed by doctors and the price of which, having already undergone substantial reductions (66%), had been generally accepted by the medical profession. It was the Squibb

conviction, therefore, that a general reduction in industry price of 5% or |0% or |5% or 20% (indeed, any reduction short of the price for narrow spectrum antibiotics) would have failed to increase the total usage of broad spectrum drugs or, conversely, that the then existing level of price motivated few, if any, doctors to prescribe less effective antibiotics.

||5. For all the foregoing reasons, Squibb concluded that any decrease in the price of tetracycline would have generated lower profits or higher losses. Since Squibb recognized that it had the worst cost position in the broad spectrum market (with the possible exception of Upjohn), the initiation by Squibb or any price reduction to retail pharmacists would hardly have been consistent with sound business judgment.

116. Similar considerations were joined by Squibb with additional factors in establishing the initial price of its combination specialty, Mysteclin. Thus, that determination was made with due regard for the price of its independent Mycostatin (nystatin) product (which in turn was influenced by the more than $1,000,000 expended in connection with research and development of Mycostatin) and with due regard for the uniqueness of the conbination and the necessity of avoiding the initiation of a price reduction in plain tetracycline products. At the time that Squibb introduced Mysteclin, it was selling a quantity of Mycostatin capsules equivalent to the units of the nystatin component in the combination product (250,000 units per capsule) at a price (per 100 capsules) of approximately $3.50. Obviously, charging a higher price for the

nystatin component would have encouraged doctors to prescribe, or hospitals to buy, Mycostatin with a competitive brand of plain tetracycline for combination therapy. On the other hand, pricing Mysteclin too far below the combined resale prices of Steclin and Mycostatin would have constituted an obvious reduction of the competitive price for plain tetracycline. As earlier discussed, Squibb recognized that such a maneuver would prompt the immediate retaliation of competitors, causing a general contraction of prices, no appreciable increase in sales and, therefore, a decrease in total revenues. For Squibb to bring about such a situation, particularly while paying bulk prices of between $500 and $400 per kilogram, would have been completely against the interests of the company. Moreover, in view of the proven utility of the combination product,

of the absence of a competitive product and of its poor (at that point, nonexistent) profit position on Steclin, Squibb had every incentive to charge as high a price for the Nystatin component (between $0 and $3.50 on bottles of 100 capsules) as it believed would maximize total revenues. In balancing those considerations, Squibb decided upon a price of $33.50 to the retailer for a bottle of 100 Mysteclin capsules containing per capsule 250 mg. of tetracycline and 250,000 units of nystatin (and corresponding prices for other dosage forms and package sizes).

117. The pricing policies followed by Squibb in considering the whole line of its tetracycline products in the prescription market represented the reasonable, considered and independent judgment of its management as to the most profitable course of action for Squibb to

pursue, based upon its experience with the pricing responses of competitors and of doctors. The record is clear that there was no agreement, understanding or discussion between Squibb and any other defendant concerning the prices at which the Squibb tetracycline products were to be, or were, sold in the prescription market.

Nature of the private hospital market

118. (a) A private hospital may be a nonprofit association (NPA) or one operated for profit. In neither event, however, is a private hospital supported by public funds.

(b) Private hospitals sometimes invite formal bids on tetracycline. Normally, however, they purchase their requirements of that drug through informal bidding arrangements. In the latter case, the hospital pharmacist or

purchasing agent will invite the salesman and his competitive counterparts to appear on a certain day, individually to negotiate the price to be paid for tetracycline products. Frequently, in the course of such negotiations the hospital buyer informs each competing salesman that another company has offered a certain deal which will have to be met or beaten in order to get the business. After one or more sessions with each company representative, the purchasing agent then places the order.

119. Private hospitals frequently operate under a formulary system, which permits the hospital pharmacist, through prior agreement with the doctors using the hospital, to dispense the brand of drug stocked by the hospital (e.g., Achromycin) for the brand specified by the doctors' prescriptions (e.g., Steclin). The

immediate effect of the formulary system is to allow the hospital to fulfill its total requirements of tetracycline by purchasing only the low bidder's product. Even without a formulary system, however, the private hospital pharmacist is able to exert significant control over his tetracycline inventory, for unlike the retail druggist, who has little influence on prescription writing habits, the hospital pharmacist has direct contact with staff physicians and can ordinarily persuade them to prescribe brands purchased on bids by indicating the cost savings involved. Moreover, the general size of private hospitals and their control of inventory enables them to purchase tetracycline from the low bidder in relatively large quantities and to make very few returns. In contrast, the retail pharmacist normally orders minimum

quantities of all broad spectrum brands that local physicians are likely to prescribe and return more goods for credit to the companies concerned.

|20. Another factor distinguishing the two classes of customers is the promotional value derived from institutional sales. Winning private hospital bids permits a company to familiarize important members of the medical staff with its products. After using that product and observing its effects, such doctors might report their success to other staff physicians. Moreover, young doctors, residents and interns would use and observe that company's brand at a time during which they were forming preferences that would be carried with them into private practice.

|21. Equipped with the superior bargaining position of an institutional (as against an individual) purchaser and benefited by the experience of negotiations with respect to all products, hospital purchasing agents generally were shrewd buyers who, by pitting one company against another, could frequently obtain better deals on tetracycline than the prices offered to retail accounts. Of course, the relative bargaining position of each private hospital depended to some extent upon its size. Prices to those purchasing in comparatively small quantities were normally offered on a routine basis by salesmen from the list applicable to that customer classification. On the other hand, because sales to large private hospitals entailed greater economic gain, Squibb management reviewed such bids and frequently authorized below schedule

prices.

Nature of the CCS market

¶22. (a) CCS hospitals, owned and operated by cities, counties or states, are supported by public funds. Such institutions generally purchase broad spectrum drugs on a formal bid basis. They are generally required by law to accept the lowest quotation submitted and to make the results of each invitation publicly available.

(b) CCS transactions on a formal bid basis can be divided into three categories: an invitation to bid on Terramycin or Aureomycin or Chloromycetin or Mysteclin--an invitation which operated as a limitation on the number of bidders in each case to the one company (Pfizer, Cyanamid, Parke, Davis or Squibb, respectively) selling the product specified; invitations involving relatively

small orders, which did not justify more than routine price responses; and invitations calling for large quantities, with respect to which vigorous price competition ensued.

¶23. As was also generally true of private hospitals, CCS institutions operated under formulary systems or otherwise controlled their broad spectrum inventory, purchased in larger quantities than did retail pharmacists and offered the promotional value of familiarizing doctors with the products ordered under bids. The larger orders of CCS hospitals were normally of greater magnitude than the larger quantities purchased by private hospitals. Those larger CCS orders, like the larger NPA orders, were under constant review by the management of Squibb.

Nature of the Federal market

124. The various accounts which comprise the Federal market include such procurement agencies as the General Services Administration (GSA), the Veterans Administration (VA), the Military Medical Supply Agency (MMSA), the District of Columbia and the United States Public Health Service, which purchased virtually all their broad spectrum antibiotic requirements directly from defendants on a formal bid, negotiation and/or price schedule basis. For example, MMSA, the largest Federal purchaser, solicited formal bids on tetracycline, awarded orders to the low bidder and generally bought the total quantity on which quotations were invited. In contrast, the VA obtained its tetracycline requirements either under a depot contract, which was awarded in formal bids on a price basis and called for fixed

amounts (although the VA reserved the right to make awards on all, part or none of the material for which quotations were invited), for shipment to three VA depots situated across the country from which the VA distributed to its installations, or under a decentralized "contract", in which the quotations of defendants were distributed in schedule form to individual VA installations which purchased directly from the supplier. GSA procurement resembled the VA decentralized system in that bid invitations and submitted price lists represented "contracts" under which individual Governmental units (including VA installations and the District of Columbia) could purchase. Neither the GSA, VA decentralized nor the District of Columbia "contracts" represented commitments by those agencies to purchase any specific quantity of drugs. The GSA contract also

included a most-favored-nations clause, requiring suppliers to extend to the GSA any lower prices offered to any purchaser (other than the MMSA) on quantities between $25 and $5,000.

Squibb's direct bidding policies on formal invitations

125. Invitations to bid on relatively small quantities of tetracycline entailed many of the same considerations that underlay pricing in the prescription market. The great number of small bid transactions required Squibb to establish a price for the routine use of branch offices and salesmen, since making executive decisions with respect to each such bid would obviously have been burdensome from an administrative standpoint and uneconomical in terms of managerial time. Competitive necessity forced Squibb to adopt as its routine prices those known to

have been bid by competitors on the smaller transactions. Squibb realized that higher prices would have caused its sales to decline (or to become nonexistent) while lower prices, necessarily made public, would have been matched promptly by competitors, causing a general contraction of price, no appreciable increase in Squibb sales and, therefore, lower Squibb revenues.

126. Large volume tetracycline bids, although occurring frequently, were not so many in number as the smaller transactions. For example, the large orders of 750 bottles or more constituted approximately 10% of the total number of tetracycline transactions appearing in Trial Stipulation No. Three, but accounted for roughly 76% of the total volume of tetracycline sold in those transactions. Because of the quantities involved, the

possible impact of each bid on other transactions throughout the country and the need to analyze the bid prices of competitors on a nation-wide basis, those direct bid decisions were centralized at the home office.

127. In making such decision, Squibb recognized that by submitting prices on tetracycline lower than those that had been previously quoted by competition, it might have increased its chance of winning a specific order. It also recognized, however, that to have done so would probably have caused its competitors, who were far better equipped to engage in retaliatory pricing, to quote the same or even lower prices on subsequent transactions. Thus, like list price reductions to retail pharmacies and price cuts on small hospital orders, lower Squibb prices on large volume bids would have

been, in the long run, self-defeating. On the other hand, unlike reductions to druggists or to small hospitals, lower bids on significant institutional orders presented opportunities for immediate increases in sales. In weighing the possible short-run benefits that would result from additional sales against the long-run earnings reduction that would result from lower prices, Squibb was forced to strike the balance against initiating price cuts because of its poor cost position. Accordingly, pressures from the field (generated by consistently lost business) were answered in such terms as:

> "In your note to me reporting the results of recent bids to the Charity Hospital on Tetracycline products, you ask whether there is anything we can suggest which would help you get a part of this valuable business which comes up every month. The answer is simply a restatement of our position.
>
> ". . .

"Squibb is in no position to take a dominating stand in the Tetracycline field, and we feel that the decision to stay within the prescribed framework is a good one under the circumstances." [Emphasis added.] NCX 943.

"Squibb because it is not a prime producer of Tetracycline would be crazy to upset this market by quoting below the regular schedule on a direct bid. . . ." [Emphasis added.] SX 212.

". . . Pfizer always works an 'angle' on these VA bids. . . .

"We have decided that we are not going to indulge in these practices and it is my personal opinion that this course, in the long run, is the wisest. I know at times it is difficult for a representative who sees this business going to Pfizer to accept this without questioning the wisdom of our position. But the alternative is a good possibility of a major price war with the inevitable effect of drastically reduced prices (including Mysteclin) and that would be bad." [Emphasis added.] SX 291.

128. While Squibb's cost position as a bulk purchaser forced it to abstain from initiating price cuts, Squibb attempted to meet the direct bid reductions of competitors under certain conditions.

Below-schedule prices quoted by competition were constantly reported by Squibb's representatives in the field. Based as they were on salesmen's observations of bid openings or of public bid records throughout the country, such reports presented an accurate picture of competitive pricing on a direct basis. That information was carefully analyzed by Squibb in an effort to predict whether price reductions to one hospital would be repeated by the companies involved, whether other companies would retaliate, whether such prices would be offered to other accounts--in short, what prices to what hospitals Squibb would probably have to meet in order to compete for significant institutional business. Contributing to those determinations were such factors as the form of competitive price reductions, the geographical area covered, the number

of competitors quoting such prices and the length of time, and the conditions under which, those prices had been offered.

129. Reports that a competitor had reduced its published CCS schedules were regarded as a permanent condition which caused Squibb immediately to revise its own price lists. Failure to have done so would have precluded Squibb from competing for any CCS hospital business. Similarly, when reports demonstrated a definite national pattern of lower competitive prices (although not a change in list price), Squibb issued equivalent lists of generally effective prices which could be used with authorization from the home office and/or on orders of minimum quantities. On the other hand, price reductions quoted on a few bids in certain local areas were not always matched by Squibb, for such quotations might be repeated by

competitors, schedule prices might still win bids in other parts of the country and meeting prices confined to one locale might add momentum to the deterioration of national price levels. In other cases, the prices bid by competitors were just too low for Squibb to meet. As expressed in SX 303 concerning Squibb's inability to match a Pfizer price reduction to the VA, "volume without normal profit is of little significance" (SX 303). During periods which witnessed a greater incidence of disease, such as the 1957 flu epidemic, normal competitive pressures were relaxed by an expansion of sales. In sum, the important and difficult pricing decisions that Squibb had to make with respect to bid transactions entailed a continuing balancing process which produced varying results as certain factors outweighed others at different times.

Squibb list price reductions of mid-1955 to CCS and Federal accounts and its earlier reductions in effective prices directly related thereto

130. When Squibb introduced tetracycline in September of 1954, its schedule price on Steclin to CCS hospitals and Federal accounts on bottles of 100 250 mg. capsules was $25.50 and $24.22, respectively, both prices less 2% for cash payments within 30 days. Such prices were geared to the normal discounts extended to those customer classifications on ethical drugs (16-2/3% and 16-2/3% plus 5%, respectively, from trade prices) and to schedule prices offered by Squibb's competitors in the broad spectrum market. As earlier explained, higher list prices would have foreclosed Squibb from selling any tetracycline to CCS and Federal accounts which, required by law to accept the lowest prices obtainable, buy on price alone; lower list prices would have been matched

immediately by competitors and would, therefore, have been completely self-defeating. But due to the vigorous price competition by the other companies for such business and Squibb's efforts to match definite patterns of price reductions, neither the $25.50 nor the $24.22 price (or commensurate prices on other strengths and sizes) survived the first few months of operation.

131. (a) Even as Squibb introduced tetracycline at, and demanded strict adherence to, the above prices, it was informed by the field of competitive prices at variance with published schedules (SX 436, p. 74). As evidenced by SX 50, such reports continued to note competitive bids to CCS accounts at least 10% below traditional discount structures. Since CCS business had become generally unobtainable at the schedule price of $25.50, Squibb

belatedly authorized, on December 15, 1954, a price of $22.95 less 2% for cash, or $22.49 net, to be used on direct bids of at least 2000 capsules and only in respect of those institutions to which such prices had been offered previously by competition (NCX 819). Squibb also emphasized that the price of $22.95 less 2%, or $22.49 net, did not represent a revision of schedule, could not be used routinely by salesmen and could be quoted only in situations within the strict limits of the authorization. Accordingly, in SX 59 (1/11/55) and SX 108 (1/26/55), the $22.49 net price was extended to the City of Quincy pursuant to reports of competitive bids at the level but, in the absence of such bid information, was not offered to Kansas City (NCX 825, 1/17/55). The latter decision proved costly to Squibb, since both Pfizer and Cyanamid quoted $22.49 net to that

institution on the next bid. In keeping with the policy announced in its letter of December 15, 1954, Squibb instructed its regional manager to bid the $22.49 net price on the following Kansas City invitation (SX 61).

(b) Other examples of Squibb's use of that price are found in NCX 373, SX 94, SX 108, SX 112 and SX 72, the latter of which reported a winning Upjohn price of $22.49 less 2% to Los Angeles County. A recurrence of the 2% discount on other bids eventually caused $22.49 less 2% to become the competitive level until further maneuvering drove the prices even lower.

132. As a result of either the extension of cash terms by competitors or their further price reductions, Squibb had difficulty winning bids at schedule prices or at the $22.95 less 2% (or $22.49 net)

price in large capsule transactions. As expressed by one Squibb representative, "When it comes to the bid business on Steclin we are simply 'out in the cold'. We are not competitive" (SX 113). Yet Squibb's hesitancy in making that price generally effective or in departing from the schedule price of $22.50 on smaller orders continued (NCX 826). On February 28, 1955, citing the established competitive pattern of $22.49 net prices, Squibb revised its December 15, 1954, instructions by authorizing branch managers to quote $22.49 net on lower quantities (10 bottles minimum instead of the previous 2000 quantity requirement), again stressing that such prices ($22.49 net and commensurate prices for other strengths and sizes) did not represent a revision of schedule and were not to be used by salesmen on a routine basis (NCX 828). Reports

from the field indicated, however, that into April of 1955 competitors were still continuing to offer the 2% cash terms (SX 63, 64) and that on May 3, 1955, Cyanamid and Bristol had revised their schedule price to $22.49 less 2%. In accordance with its basic policy in respect of all pharmaceutical items, Squibb revised its own schedule at 5:30 p.m. on May 4, 1955, to meet those competitive list price reductions.

133. An equivalent pattern of competitive price changes with respect to other dosage forms and package sizes of tetracycline resulted from Squibb's belated efforts to keep pace with the deterioration of CCS prices. Evidencing some of those revisions in list, generally effective and special situation prices is the following chart:

Dosage Form & Package Size

	50 mg./100's Capsules	100 mg./100's Capsules
CCS Price	$5.95 less 2%*	$11.47 less 2%*
Date & Exhibit	9/17/54 NCX 814B	9/17/54 NCX 814B
Type	Schedule Price	Schedule Price
Conditions	Routine	Routine
Reasons	--	--
CCS Price	$5.25 (Net)	$10.12 (Net)
Date & Exhibit	2/9/55 SX 112	2/9/55 SX 112
Type	Special Situation	Special Situation
Conditions	"You may offer the following prices to Spartanburg General Hospital. All of the following prices are net with no cash discount. Please be absolutely certain that your customer fully understands."	See column under 50 mg./100's
Reasons	--	--
CCS Price	$5.248 (Net)	$10.117 (Net)
Date & Exhibit	2/28/55 NCX 828	2/28/55 NCX 828
Type	Generally Effective	Generally Effective
Conditions	"It is suggested that you use the prices only where a fairly reasonable quantity is involved. Prices and minimum quantities are as follows [10 bottles]:"	See column under 50 mg./100's

* Cash discount.

	50 mg./100's Capsules	100 mg./100's Capsule
Reasons	"It is now pretty well established that major competitors are quoting tax-supported institutions on the basis of the State, City and County price less 10% and 2%. No further discount, cash or otherwise, is offered. These prices are being quoted on all potencies and sizes."	See column under 50 mg./100's
CCS Price	$5.247 (Net)	$10.116 (Net)
Date & Exhibit	3/25/55 SX 51	3/25/55 SX 51
Type	Generally Effective	Generally Effective
Conditions	Refer to Authorization of February 28, 1955	Refer to Authorizati of February 28, 195
Reasons	"On February 28, 1955 I gave you a list of net prices to quote to tax-supported institutions on requests for Steclin. "We have seen enough bids by competition since that letter was released to indicate we should make some changes."	See column under 50 mg./100's
CCS Price	$5.247 less 2%*	$10.116 less 2%*
Date & Exhibit	5/4/55 SX 65	5/4/55 SX 65
Type	Schedule Price	Schedule Price
Conditions	Routine	Routine
Reasons	--	--

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Indeed, Squibb's attempts to meet defined patterns of competitive prices reported by its representatives produced changing announcements with a rapidity that sometimes bewildered the field. One example of Squibb's endeavor to explain its then recent price instructions, as well as some of the reasons underlying the constant change, is SX 150:

> "I can understand why you are somewhat confused about our instructions on bid prices of Steclin. Anyone going back over the instructions which have gone out from this office would find it difficult to comprehend.
>
> "There is no part of our operation which changes so quickly. What we are doing today, may be completely out of date one month from now. We can not predict anything. Our action is predicated completely on what competition does. We do not originate, we merely follow. . . . [Emphasis added.]
>
> ". . .
>
> "My letter of July 7th was an attempt to bring about a condition where we would be competitive on a bid basis only. I emphasized that you should bid exactly on the basis of the

> prices shown in the letter. This was necessary. Reports show that the other producers are bidding sometimes on the basis of 2% cash discount and sometimes on a net basis. We are merely following the pattern. We did not include the large sizes of Steclin capsules because no change was called for. So far as we know the prices and terms we are now using are the same as any competitors."

134. Similarly, the $24.22 less 2% price at which Squibb introduced 250 mg. capsules/100's to Federal institutions was soon driven considerably below that traditional discount figure. At least by December of 1954, reports from its field staff made Squibb aware that Pfizer was quoting $19.58 to VA installations (NCX 822) and (by January of 1955) that both Pfizer and Cyanamid were quoting that price (SX 103). Nevertheless, the Squibb position was (as stated in SX 105):

> "We are aware of the Pfizer price but as of this moment we are not going to meet it. There is too much business to be had at prices considerably higher

than $19.58 and we would prefer not to go so low at this stage of the game."

However, by April of 1955 the $19.58 net price had become the competitive level. Accordingly, on April 15, 1955, Squibb advised its branch managers:

> "It is evident, from reports reaching this office that all suppliers of Tetracycline are now frequently quoting $19.58 net per 100 for 250 mg. capsules to V.A. Hospitals. You are authorized to meet this price. No manufacturer has as yet made an official announcement of the price. Neither will we.
>
> "We are not to offer $19.58 on a routine basis but where it is being used by a competitor you can agree to meet it.
>
> "There will be no change in any other size or potency of Steclin products. The Federal government schedule should be quoted on all except 100's 250 mg. capsules." NCX 830.

Confining the $19.58 price to the limits of competitive activity--bid transactions (rather than on a routine schedule basis) and 250 mg. capsule/100's only--demonstrates the particular caution that

Squibb had to exercise in the Federal area to refrain from originating any reductions which undercut the prevailing competitive level. Squibb could not compete aggressively for Federal business on a price basis, not only because its cost position made such lower prices uneconomical but also because a reduction in Federal prices, the lowest segment of the discount structure, would have been likely to cause a depression in price to other customer classifications. Finally, on May 4, 1955, when Squibb discovered that competitors had reduced their Federal list prices to $19.58 less 2%, Squibb revised its schedule, as a matter of basic policy, to meet the competitive situation.

Factors contributing to the mid-1955 list price reductions to CCS and Federal accounts and to subsequent reductions in effective prices

Direct deviations from schedule prices

135. (a) The factor that contributed most immediately to the deterioration of bid prices was the frequent deviation by competitive companies on a direct basis both from list prices and from other competitive levels of price. Numerous examples of tetracycline bids below then existing price schedules--a situation which eventually gave rise in mid-1955 to a general revision of CCS list prices-- are recounted in Proposed Findings 130 through 134, supra, and are evidenced by Stipulation No. Three. That Squibb and others subsequently deviated on a direct basis even from the revised schedules is also demonstrated by the Stipulation and by numerous Squibb exhibits. Of course, the

initiation of price cuts was out of the question for Squibb, because of the self-defeating nature of such action and because of a relatively weak cost position. Thus, Squibb deviated from schedule price only to meet competition and then only after a definitive pattern of competitive prices had been disclosed by reports from the field.

(b) For example, as soon after the May 1955 revision of schedule price as the following month, competitive bids of $22.49 less 10% less 2% ($19.836) were reported by Squibb representatives (SX 147, 157). Noting other isolated instances of below schedule quotations by Pfizer, Cyanamid and Bristol in San Francisco and Los Angeles, Squibb advised a regional manager:

> "At the moment we cannot agree to meeting a competitive price in both cities which in the first place is so

far below the regular schedule and secondly, is not being used in any other part of the country. We feel that we cannot make the exception in these two spots." SX 158.

In contrast, Squibb's response to a continuous flow of reports spanning a four-month period (October 1956 to January 1957) with respect to Pfizer and Upjohn bids of $19.58 to certain CCS accounts (NCX 946, 947, SX 50Z, 225, 226, 228) was as follows:

"Authenticated reports sent in by you indicate that Upjohn and Pfizer have been using the Federal Government price of $19.58 less 2.0% per 100 Tetracycline 250 Mg. capsules when responding to certain State, City and County bids.

"Seemingly this price is being used where a sizable quantity is involved. Both companies bid the Federal price on a direct basis only.

"It is our intention to meet the price where we know either Upjohn or Pfizer have used it previously but in every case you should get in touch with us for approval. Indiscriminate use of this price must be avoided." NCX 389 (1/21/57).

As documented by numerous Squibb exhibits, as well as by Stipulation No. Three, Squibb had frequent occasion to implement that policy. (SX 233, 244, 245, 247, 248). By March of 1957, however, Upjohn had apparently discontinued the $19.58 price to CCS accounts. Noting that bids of $19.58 were not appearing with the same frequency and showing concern for the generality with which it was offering that price, Squibb first qualified (SX 251), and finally canceled, the January authorization (NCX 393). Nevertheless, Pfizer continued what appeared to Squibb to be its policy of offering Federal prices to CCS accounts (SX 50Z, 314, 337).

In the early 1960's, following reports that its competitors were again quoting below schedule prices on a direct basis, Squibb met such competitive activity by authorizing its field managers to

deviate directly from the Squibb schedule (SX 420, 422, 424).

136. On various other occasions, Squibb pursued and countermanded policies of deviating directly from CCS list prices to meet below-schedule quotations of competitors on large bid transactions. Fluctuations of that nature were caused by the balancing of such conflicting economic interests as the desire to compete for significant orders, the depressing effect on profits as lower bids became more universal and the risks of adding impetus to the decline of CCS prices and of instigating a general depression of the entire price structure.

137. The latter considerations were particularly applicable to Squibb's pricing in the Federal market, which represented the lowest segment of the price

structure. Its hesitancy to deviate from Federal schedules is illustrated by its consistent refusal over a seven-month period (December 1957 to July 1958) to match the $17.50 price which reports from the field had demonstrated was being offered by competition to Federal institutions. Finally, in July of 1958, Squibb indicated a willingness to quote $17.50 to Federal accounts on orders of significant quantity (SX 322) and in September of 1958, it determined to meet Pfizer's recent price of $17.60 less 2% cash discount in VA institutions "where we know we can get the business at the same price [quoted by Pfizer] . . ." (SX 346).

Cash discounts and mills

138. As demonstrated by Proposed Findings 130 through 134, supra, the constant decline in institutional prices

was frequently the result of seemingly minor deviations by a competitor in terms of fractions of cents (mills) and cash discounts (2%). Squibb and other companies had been offering the 2% cash discount from schedule prices of ethical drugs long before the introduction of broad spectrum antibiotics. With respect to such products as tetracycline, in which competition was particularly intense, Squibb often bid schedule prices less 2% on a net basis, thus obviating the necessity for customers to pay cash within a prescribed period in order to earn discounts and thereby offering an effectively lower price to meet competitive quotations. The arithmetical result of applying cash discounts to schedule or effective prices on net bids resulted (most frequently with respect to lower-priced items) in figures of three and four decimal places (e.g., $.67|3 net,

rather than $.685 less 2% on the |00 mg. IM product).

|39. Since CCS accounts generally awarded orders to whichever bidder technically submitted the lowest quotation, discrepancies in cash terms and mills were particularly significant in bids to such institutions. Balancing the chance of gaining awards through undercutting prior bids against the inevitable contraction of price through competitive retaliation, certain companies sometimes tried to win significant orders with as little sacrifice of revenue as possible (on that bid and on subsequent bids) by submitting net quotations (where previously competitors had bid on 2% terms), by lengthening the dating of discounts (e.g., 45 or 60 instead of 30 days) or by rounding off, shaving or dropping the mills on net quotations. Balancing the same considerations, other

companies would refrain from originating price reductions and would bid the previously competitive price less standard 2%-30 days terms or bid on a net basis carrying their multiplication out to the indicated number of decimals. Thus, there is nothing mysterious about the fact that the prices bid on tetracycline were occasionally uniform to three or four decimals, since such figures merely represented the accurate extension into mills of traditional cash discounts. Nor is there anything unusual about the fact that CCS awards were often made on the basis of fractions of cents (when the lowest bid was submitted on a net basis or even on the basis of cash discount periods (when the otherwise lowest bids were submitted on 2% terms). Indeed, the intensely competitive nature of tetracycline pricing is displayed by the

fact that deterioration in CCS prices frequently ensued in 2% stages (e.g., $25.50 less 2% to $24.99 net; $22.95 less 2% to $22.49 net to $22.49 less 2% to $22.04 net; $19.58 less 2% to $19.188) or by mills at a time (e.g., $19.188 to $19.18; $.687 to $.685 to $.6713 to $.67) as one competitor after another aggressively solicited institutional business.

140. Squibb, however, because of its disadvantageous cost position could no more instigate price reductions by offering trade rather than cash discounts than it could by shaving or dropping mills. As stated by Mr. Toohy, General Manager of Squibb (Tr. 1128-29):

> "[If mills were rounded off the the next highest number] you wouldn't get the business. . . . [If mills were rounded off to the next lower number] you would get the business--assuming that you were the only one who did it.

> Then you could expect that that practice on the next bid around would be met by somebody or other and it could develop into a general reduction of schedule."

Indeed, Squibb experienced just that situation in connection with the unauthorized quotation of a field manager. On a Los Angeles County invitation (closed April 6, 1955), Squibb instructed its local manager to meet Pfizer's winning bid on the previous invitation of $22.49 less 2%. For some reason the Squibb representative submitted a bid of $22.49 less 2% trade discount, or an effective price of $22.0402, which undercut competition. The "reactions" and "serious results" anticipated by Squibb as a result of underbidding the competitive price level (NCX 375) developed rapidly. On the following Los Angeles County bid invitations, trade discount terms were offered by competition, and thereafter a

process of retaliatory pricing, given momentum by the Squibb mistake, reduced the price of 250 mg./100 capsules from $22.49 less 2% progressively down to $19.18, the price of the 500 mg. IM product from $.687 to $.60 and the price of the 100 mg. IV product from $2.13 to $1.90.

141. Consequently, Squibb emphasized to field managers that mills should not be rounded off or dropped from authorized prices. One branch manager, who took it upon himself to drop two decimals (quoting $.67 net instead of the authorized $.6713 net on the 100 mg. IM product), was reproved by the home office (NCX 395, 396, SX 275) since, as illustrated by the Los Angeles County situation, disobedience by branch managers could not be tolerated. While Squibb management might occasionally decide to take calculated risks (e.g., through dealer bid transactions, see

Proposed Findings 145 through 152, infra), risks taken by branch managers, who were in no position to weigh possible national effects, could have been economically disastrous if allowed to continue.

142. Although Squibb avoided shaving prices through cash terms or mills, it watched reports of competitive practices in that regard and attempted to meet defined patterns of such competition. For example, at a time when Squibb's generally effective price on the IM product was $.687 net (March 1955), it received a report that Pfizer had won a bid to King County at a price of $.685 net. Noting then to watch for a recurrence of the $.685 price ("We may want to change our instructions to the P&Q [Branch Price and Quotation] Departments", (SX 52), Squibb eventually authorized bids of $.685 less 2% (SX 53), which by that time (July 7, 1955) had

become the competitive quotation. Similarly, on February 28, 1955, Squibb authorized generally effective prices of $5.248 net on the 50 mg./100 capsules and $10.117 on the 100 mg./100 capsules (NCX 828). On March 25, 1955, those instructions were altered in the following terms:

> "On February 28, 1955 I gave you a list of net prices to quote to tax-supported institutions on requests for Steclin.
>
> "We have seen enough bids by competition since that letter was released to indicate we should make some changes. Will you be sure that you change the price of the 50 mg. capsules 100's <u>from $5.248 to $5.247</u> and for the 100 mg. 100's <u>from $10.117 to $10.116</u>.
>
> "<u>I know that this is almost an insignificant change but it means the difference between our getting the business or losing it</u>.
>
> "Please keep sending your reports in to me as we certainly want to be up to the moment on what competition is doing when quoting on this important product." [Emphasis added.] SX 51.

The following price changes with respect to

250 mg. capsules, bottles of 16's, further evidence Squibb's practice of meeting established patterns of such reported competition: $3.78 net (2/7/55, SX 53); $3.7485 less 2% (9/30/55, SX 163); and $3.74 (1/27/56, SX 198).

Dealer bid transactions

143. Squibb and other companies also deviated from schedule and generally effective prices of tetracycline on an indirect basis by employing local dealers to bid for CCS and private hospital business. Dealers used by Squibb in that connection were typically retail pharmacists and, in certain instances, wholesalers, whose list price from Squibb was higher than the CCS list price. They were, however, enabled to bid for institutional orders by receiving from Squibb a handling allowance of 10% from CCS or private hospital schedules Squibb sales

through dealers to tax-supported institutions (and, though infrequently, to private hospitals) were authorized on the basis of two types of drop-shipment transactions. In one, goods were delivered by Squibb directly to the hospital account, the dealer was billed for the sale at a price 10% below the applicable schedule (private hospital, which is the same as, and CCS, which is lower than the price list extended to dealers) and the dealer collected the contract price from the institutional purchaser. The other method of drop-shipping orders, seldom used, was for Squibb to deliver the goods to the hospital, pay the dealer a 10% handling allowance but bill the institution directly for the sale. In rare cases where the dealer used his own inventory, billing adjustments were made by Squibb in respect of subsequent sales to the dealer so as to

afford him a 10% handling allowance on the hospital transaction. Drop shipments were preferred, and thus used generally, because they permitted Squibb to exercise control over the entire arrangement and made it difficult for the wholesaler or retailer to build up his inventory at lower prices.

144. Dealer bid transactions and the handling allowance of 10% are traditional in the drug industry and had been used by Squibb for many years with respect to biologicals, arsphenamines, insulin, all antibiotics and numerous other products. Because of local law or custom, many CCS and private institutions could be sold only through local dealers. Again, because of statute or the general preference of institutions for local distributors, such dealers were often awarded contracts in cases where their bids were identical with, or even higher than,

those of national concerns. Moreover, counties such as Fresno, California, subjected the sales of nonresident companies to taxes which did not apply to local distributors. Thus, numerous situations existed in which handling allowances were necessary, although not from a price concession standpoint.

145. On the other hand, the handling allowance system was used frequently by certain companies and, from time to time, by Squibb as an indirect method of meeting or undercutting competitive levels of price on bids to hospital accounts. In such cases, dealers were authorized to pass on all or part of their handling credits to institutional purchasers and, occasionally, were given additional allowances for that purpose.

146. Squibb's participation in dealer price concessions is evidenced not only by the fact that it put dealers in a position to bid for institutional business but also by the considerable control it exercised over dealers' below-schedule quotations. Since prices bid by dealers to CCS and private hospital customers were oridnarily lower than those paid by dealers on purchases for their own accounts, dealer sales to institutions had to be subsidized by Squibb (with a handling allowance from hospital schedules) unless dealers were to participate in such business at a loss. In some cases, dealers requested and obtained confirmation of the price that they would receive from Squibb on hospital orders and the price which they could quote on bids, e.g., SX 261. In other cases, Squibb authorized its field representative to work with a dealer to arrange the bid price and

the price that Squibb would charge the dealer on merchandise for award-winning quotations, e.g., SX 159:

> ". . . We must bid Steclin products regular prices on direct bid. You may work with dealers arranging for best possible price to dealer who will give away part or all dealer handling credit."

SX 162:

> "Bid regular prices Steclin products to L.A. County. Discuss with Lee Herbert a bid through local dealer."

and SX 298:

> "You may authorize E. G. Field to price MysteclinV 250mg. Capsules, 100's, to State of Texas Institutions under the Squibb specialty contract at a discount of 9.0% from the regular City, County, State price.
>
> "To compensate Field you may give him an extra 5% handling credit on all sales made by Field to the State at this schedule."

A comparison of the foregoing instances in which Squibb authorized below-schedule bids by dealers and those in which Squibb prohibited dealers from passing on a part

of their handling allowances to institutional customers further evidences Squibb's role in the determination of dealers' bid prices, e.g., NCX 393:

> "We will not at any time permit a dealer who is quoting on Steclin or any of the other broad spectrum antibiotics to offer anything but our regular City, County, State prices.
>
> ". . .
>
> "[We have decided] to adhere strictly to our regular schedules and warn those who are acting as our agents in any of these transactions that we expect them also to quote our established schedule." [Emphasis added.]

and NCX 397:

> "Tetracycline prices to Charity Hospital must be quoted at full schedule by any dealer offering Squibb. This policy must be followed whenever dealers quote on a Squibb Tetracycline product."

The method of enforcing such mandates is made apparent in NCX 400:

> "Please get in touch with the local representative and urge him to see the Williams P & S Pharmacy about [a recent price cut]. We cannot tolerate any distributor quoting on a Squibb brand at a price below our regular schedule of $22.49.
>
> "We should warn Williams P & S that we will refuse to pay a handling credit should he cut the price on any future bid." [Emphasis added.]

|47. The fact that Squibb considered dealers to be acting on its behalf is illustrated by the numerous reports that tetracycline business was obtained "through" particular dealers, Squibb's authorization of field representatives to solicit business "through" dealers and such other correspondence as SX |94:

> ". . . [R]egarding SS Drug Store's price on 50mgm. Steclin Capsules to Charity Hospital, New Orleans, Louisiana--
>
> "Mr. Herberger is correct in assuming that I am giving no other concession beyond the |0% and 2% to SS Drug on Tetracycline. Mr. Schiverkhardt is bidding just as a favor to us and to Squibb." [Emphasis added.];

SX 204:

"In the case of Tetracycline we are planning, on the next occasion, to use one of our local professional wholesalers to submit a bid in order to meet Pfizer type of competition." [Emphasis added.];

SX 212:

"It is my own personal opinion that other manufacturers of Tetracycline products are giving some under the table discounts beyond the regular 10%. It is hard for me to believe that the dealers are handling the Tetracycline business at a price which practically eliminates any profit they might make. Here again Squibb because of its position cannot afford to give an extra discount.

"There is only one way I see that might help us get a part of the Tetracycline business, and that is by prevailing upon one or two of our friendly distributors to give away a large part of his handling credit. Maybe we have a few friends who would do this for us." [Emphasis added.];

SX 228:

". . . We are currently working with one of our good distributors to try to obtain a good part of the tetracycline business in the state of Oklahoma . . .";

SX 260:

"I know that we have a dealer through whom we can work; but as you

can see, in most instances [prices recently quoted by dealers on Pfizer tetracycline] are better than our 10% discount." [Emphasis added.];

and SX 357:

"You may work through any local dealer of your choice on the next bid put out by San Diego County . . ." [Emphasis added.]

148. (a) Squibb's use of dealers to match and, infrequently, to underbid the direct or dealer quotations of competitors was founded on several considerations. When employed as a method for cutting the price, bidding through dealers was not so self-defeating as direct price cuts because, offering some measure of concealment, it lessened the risk of retaliation. Just as Squibb was sometimes confused by the dealer bids of other companies, it realized that competitors could not always be certain tha the Squibb brand was supplied by a local dealer, nor could they always determine whether the

dealer had taken it upon himself to sacrifice part of his handling credit, whether he had been encouraged by Squibb to do so or whether he was receiving a further allowance from Squibb. To the extent that competitors were uncertain as to the degree of Squibb participation in the price-cutting transaction, they could not easily compare such quotations with other cases in which Squibb was known to have participated (either through dealers or on a direct basis) and they could not determine as readily whether the bid would be repeated or whether similar bids would be quoted on a wider geographical basis. In an effort to maximize the concealment value of dealer bid transactions and to avoid giving such tactics the appearance of permanent practices (which would have caused immediate retaliation), Squibb advised its representatives that it could not become

"officially connected" (NCX 369) with such a transaction or authorize it "in writing" (NCX 378).

(b) Those precautions were also taken to preserve another value of the handling allowance transaction. In both meeting or underbidding competitive prices, dealer bids offered considerable flexibility. Since competitors would not always match (directly or indirectly) a dealer's quotation, Squibb could withdraw from dealer price cuts on subsequent invitations or could meet, through its agent, the concession of a competitor's dealer without precipitating a general price reduction. It would also follow that flexibility was additionally afforded in connection with the "most-favored buyer" requirements of certain CCS institutions. For example, some CCS accounts followed the practice of rejecting bids of companies

which had submitted lower quotations to any other tax-supported institution--a policy which could be avoided through the use of local distributors. If Squibb should have decided to cut its schedule price to a hospital in order to meet competition, it could have done so through a dealer, without worrying about the effect on "less-favored" hospitals. On the other hand, should Squibb have cut the price on a direct basis in the past, it could use a dealer to quote a higher price to a "less-favored" hospital without running afoul of such hospital's "most-favored buyer" policy.

149. As was true of other pricing tactics employed by Squibb in the broad spectrum market, the formulation of dealer bid policies involved a continuing balancing process which produced varying

results as certain factors outweighed others at different times.

150. A particularly stringent cost position ($1,000 and $500 per kilogram) during the first months in which Squibb marketed tetracycline necessitated extreme caution in connection with all bid practices. And since Squibb salesmen were accustomed to the price war tactics in other antibiotics and in other products, Squibb attempted to express its policy with respect to the new broad spectrum product in unequivocal terms. Thus, Squibb cautioned its representatives that "Steclin [was] not to be involved in any special terms used to meet competitive situations in other antibiotics" (NCX 367), that Squibb could not be "officially connected with any price maneuver on Steclin which could be construed as cutting the price"

(NCX 369), that it intended to avoid "accusations" of such behavior (NCX 372), that there could be "no compromise with [its] position of maintaining prices on this product" (NCX 370)--in short, that Squibb had to refrain from engaging openly in any tactic which might accelerate the deterioration of prices through the retaliation of companies better able to sustain lower levels of price.

|5|. Indeed, it was not until its bulk price was reduced to $350 per kilogram in the late summer of 1955 that Squibb reacted to the dealer bid and free goods tactics of prime manufacturers. But since its cost position still remained relatively disadvantageous, Squibb did not originate dealer bid maneuvers but rather followed the competive pattern in respect of particular accounts or certain areas,

predicating its actions on the reports of its field representatives. For example, Squibb's position with respect to reported competition on a King County bid was:

> ". . . Pfizer got the Tetracycline business through the Interbay Pharmacy who cut the price. As you know we are not getting into this dog fight." SX 293.

The opposite approach is illustrated by SX 298:

> "This deviation [authorization of dealer to bid 9% below schedule price to State of Texas] from our normal pricing on Mysteclin-V is being authorized to meet a competitive situation created by Weeks Drug, Incorporated, who have offered Lederle's Acrostatin on the basis of a discount of 9.0%."

A well defined policy change in that regard is documented by the following exhibits:

> "I am getting awfully tired personally of getting the same reports over and over again from all over the country showing that time after time local dealers quote tetracycline products at a price which is generally within the 10% handling credit which

Pfizer and others give. This evidence is so strong from all over the country that one of these days I hope we will be able to give you authority to disregard what a dealer does on our products so long as he does not give more than the 10% which we allow. As of now, however, I have no choice but to continue to insist that dealers must maintain our prices. SX 305 (1/14/58).

"We cannot meet the prices the dealer quoted on Pfizer Tetracycline 20Mg. Capsules, bottles of 100. As you know we have strict instructions to insist that all dealers quote Squibb Tetracycline price at the full schedule. This is, however, becoming quite a serious problem and every such report is referred to Mr. Toohy and Mr. Arscott. Maybe one of these days, on the basis of the number of these reports they may relent and permit us to match what Pfizer is doing. As of now, however, there is nothing I can do to help you." SX 308 (3/31/58).

"We have arrived at a point where we realize we must relax our stand insofar as allowing dealers to give away part of their handling credit when quoting on Squibb. In those cases where competition allows a dealer to repeatedly time after time give away part of their handling credit and it is a well established pattern, we will do the same thing." SX 321 (7/28/58).

152. Other considerations from time to time reinforced Squibb's cost-

motivated reluctance to engage in dealer bid tactics and caused fluctuations in handling allowance policies. A lower net price was realized on dealer transactions than on direct sales because handling allowances had to be paid. Thus, new price "lows", reached through reductions in effect prices, were not ordinarily given to dealers as a basis for their quotations. More importantly, price concessions through dealers could, in the long run, have been just as self-defeating as those offered on a direct basis. For when one company encourages dealer tactics in many areas over a considerable period of time, competitors recognize that that company's product is being offered and that it is that company's national policy to engage in such activity--both factors increasing the risk of retaliation and of accelerating a general deterioration in institutional

prices and, ultimately, in prices to all classifications.

153. Squibb bid through dealers only on a spot basis and, in many cases, used different dealers in one locale for different bid transactions. In order, therefore, to maintain its contact with local purchasing agents and to keep its name on CCS bid lists in connection with tetracycline and other products, Squibb usually submitted direct quotations even when it arranged for dealers to underbid such quotations. The record is clear that there was no agreement, understanding or discussion between Squibb and any other defendant concerning handling allowances and dealer bid transactions.

Free goods

154. Contributing to the reduction of broad spectrum prices and to the

diversification of prices within various customer classifications were the differing free goods practices of certain companies. The distribution of free goods, a traditional practice in the drug industry, ordinarily involves a sale transaction in which the seller supplies the purchase of a particular drug with additional quantities of that drug without charge. Due to the prevalence of free goods transactions in the broad spectrum market, Squibb, from time to time, undertook to meet such competition by offering and giving free goods on tetracycline for the purpose and with the effect of reducing net prices.

155. The customers to which Squibb gave free goods were hospitals (principally private hospitals) and in some instances retail pharmacists. The free goods distributed by Squibb were keyed to specific sales transactions and normally

consisted of the same dosage forms and package sizes as those ordered and paid for by the purchaser. Free goods were generally delivered together with the remainder of the order directly from Squibb's warehouse and were invoiced separately as a no-charge shipment. Thus, in a typical free goods transaction a hospital pharmacist ordering ten bottles of Steclin 250 mg./100's capsules would be shipped that quantity, would be billed for eight bottles and would receive two bottles free. The net price per bottle would be $24.48 rather than $30.60--obviously, a 20% reduction from schedule price and viewed as such by the customer to whom the free goods were given.

156. Squibb preferred to meet the free goods practices of competitors on an equivalent basis rather than through a reduction of invoice prices because of the

degree of concealment and flexibility afforded by the free goods transaction. Free goods offers and transactions, which were not always revealed by hospital or retail pharmacists and were not always transcribed on account records, were sometimes obscured from the knowledge of other competitors. In contrast, a reduction in price which appeared on the face of an invoice could be detected more quickly and accurately by competitive salesmen. Moreover, price concessions in free goods offered by any one competitor varied with respect to different customers and fluctuated over different periods of time. By offering equivalent free goods arrangements, Squibb could meet reported competition on a selective basis at the accounts and during the periods of its own choice. On the other hand, Squibb recognized that matching competitive free

goods concessions (for example, to private hospitals) by offering equivalent invoice reductions would have been discovered quickly by competitors and would probably have been interpreted by them as a general revision of the Squibb price to that customer classification. The likelihood that a general reduction of private hospital schedules (and, perhaps, of retailer schedules, which are traditionally the same) would thus have been occasioned presented risks that Squibb, as a bulk purchaser, was in no position to incur.

157. As was true in respect of other pricing tactics in the broad spectrum market, Squibb did not initiate the distribution of free goods but rather followed belatedly the activities of competitors as reported by its representatives in the field. Since free goods constituted the principal method of price

competition in the private hospital market and since private hospitals appeared to be the primary recipients of competitive free goods offers, Squibb's free goods practices were largely confined to that customer classification.

158. Soon after Squibb's entry into the broad spectrum market, it began receiving reports of competitive free goods activities to an extent that led management to comment, "Obviously, we see the pattern that is forming is one that matches the old Penicillin combat days" (NCX 818). Nevertheless, the early strictures of particularly high bulk prices ($1,000, $500 and $400 per kilogram) militated against Squibb's making any price reduction to private hospitals which might have added momentum to that pattern and have had repercussions in the retail trade. Thus, despite numerous reports of competitive

free goods transactions, Squibb refrained from attempting to meet such competition (or, indeed, from offering any free goods on tetracycline) until the late summer of 1955, after the bulk price reduction to $350 per kilogram. That reduction in bulk price, however, still left Squibb with a relatively poor cost position, from which it could not afford to engage aggressively in free goods competition. Thus, while field reports recounted competitive transactions involving as much as 50% in free goods, Squibb conservatively authorized only 20% for the free goods arrangments that it negotiated--a policy noted at a Squibb executive management meeting as follows:

> "Tetracycline competition is very severe; we have numerous reports on Pfizer, Lederle and Bristol giving one free with one sold. We have not met this competition, although we have

> offered 20% free goods on Steclin. ..." NCX 952E.

159. For the remainder of 1955 and throughout the period in suit, the Squibb free goods policy vacillated, sometimes countenancing as much as 50% in free goods to meet reported competition but more frequently confined to the 20% transaction. Weighed in the balance of Squibb's free goods decisions were such factors as the volume of particular orders, the general pattern of competition, the pressures exerted on management by Squibb salesmen to meet such competition (considerations which sometimes caused a relaxation of Squibb policies) and the generality with which Squibb had been authorizing reductions in excess of 20%, the expense of such practices and the need periodically to stop and analyze the utility of giving free goods (considerations which usually

prompted more restrictive policies). Such fluctuations of policy and the general reluctance with which Squibb authorized free goods to meet competitive situations caused the loss of many hospital orders, typical of which is the Grace New Haven transaction reported in SX 18| by a regional manager:

> ". . . You will recall, of course, that the original price upon which you stood firmly quoted to this hospital was $19.96. It was only upon the day of the bid when I stated to you that the information which we had received was that Pfizer was going to bid approximately $15.00 per 100 that you authorized price of $17.96.
>
> "Upon this occasion, as we have upon so many previous occasions we did not institute but rather we followed belatedly the price gyrations of responsible manufacturers who were quoting on antibiotics." [Emphasis added.]

In sum, Squibb was generally too late with too little to compete with the more aggressive free goods practices of the

prime manufacturers.

160. Squibb seldom gave free goods to retail accounts because there was little competitive or economic pressure to do so. While reports of competitive free goods concessions in private hospitals literally streamed into the home office, relatively few instances of such transactions were reported to have occurred in the prescription market. Pursuing a policy of meeting only patterns of competition demonstrated by a series of authenticated reports, Squibb had few occasions to transact free goods arrangements with the retail trade. Clearly, initiating the distribution of free goods to retail pharmacists would have been as self-defeating in the long run as a reduction in schedule price. And neither free goods concessions nor meeting competitive activities under less restrictive

conditions was compelled by the bargaining position of the typical retail account. Unlike private hospitals, which purchase tetracycline in relatively large volume on a bid basis and use what they buy, individual druggists purchase small quantitites of all brands that doctors are likely to prescribe, have little control over such prescriptions and can return unsold merchandise to Squibb for full credit. It would certainly have been pointless, therefore, to risk a down-cycle of retail prices (and, commensurately, a further down-cycle of prices to all other classifications) by encouraging druggists, through free goods concessions, to stock extra quantities of Squibb tetracycline not only when such reductions were unnecessary from the standpoint of meeting competition or acceeding to the purchasing power of the account but also when Squibb could

reasonably have expected that much of the additional inventory would have been returned.

Mysteclin price reductions

16. (a) From early 1955, when Mysteclin was introduced, to the middle of 1957, when Cyanamid and Upjohn brought out competitive combination products, Squibb had little incentive to offer anything but schedule prices on its combination specialty. The general acceptance by doctors of combined broad spectrum and antifungal therapy made price concessions on Mysteclin unnecessary in that market. An the growing tendency of hospitals to invite independent bids on Mysteclin, permitting Squibb and sometimes its dealers to submit the only quotations, enhanced a firm bid policy. Nevertheless, Squibb found that the deterioration of institutional prices on tetracycline

hydrochloride had induced some hospitals to switch from Mysteclin to plain tetracycline products. For that reason, the competitive reduction (in May of 1955) of Federal and CCS price schedules for plain tetracycline caused Squibb to make similar reductions in its Federal and CCS schedules for Mysteclin. Those schedules had been at prices of $27.92 and $26.53, respectively, less 2% for cash, for bottles of 100 250mg. capsules (containing 250,000 units of nystatin) and were reduced to $24.95 and $22.16, respectively.

(b) But Squibb believed that neither a further decreased in schedule price to tax-supported institutions, nor the deviation from that schedule on a direct or dealer bid basis, nor the distribution of free goods to any customer classification would have increased Mysteclin sales sufficiently to compensate

for the lower revenues generated by reduced price levels. The continuous expansion of Mysteclin sales conclusively demonstrated the efficacy of that policy. Indeed, such dramatic sales expansion (which enabled Squibb to capture an increasing share of the broad spectrum market, see Proposed Finding 9, supra) underscored the utility of competing through the promotion of a differentiated product form as compared with the utility of initiating price reductions (see Proposed Findings 110 through 115 and 125 through 129). Moreover, the fact that some cross-elasticity of demand between Mysteclin and tetracycline hydrochloride had been proven to exist further reinforced Squibb's interest in avoiding any maneuver on Steclin which would have accelerated price deterioration in plain tetracycline to a point that might have necessitated additional price

reductions in the combination product.

162. When Cyanamid and Upjohn introduced their broad spectrum-antifungal brands in mid-1957, Squibb had a head start (or lead time, as it is called in the industry) in the combination product market of approximately two and a half years. Experience in the drug industry in general and in the broad spectrum market in particular (e.g., Cyanamid's success with Achromycin) had taught that a dominant position gained in that manner can be maintained. Indeed, competitive entry into the tetracycline-nystatin field actually served to increase Squibb's Mysteclin sales, for the additional emphasis placed by competitors on the utility of such combination therapy reinforced the promotion that Squibb had conducted for over two years and led doctors to prescribe the more familiar combination, Mysteclin.

The continued success of Mysteclin, combined with Squibb's interest in at least preserving its modest profit on that product, militated against the initiation of an aggressive price policy. However, correspondence from representatives in the field soon indicated that Cyanamid and Upjohn (and ultimately Pfizer) had introduced into the tetracycline-nystatin market the tactics common to plain tetracycline (e.g., direct deviations from schedules, price concessions through dealers, distribution of free goods). On a selective basis Squibb eventually met instances of such reported competition.

Squibb contacts with other defendants

163. The only contacts that Squibb had with Bristol were those in connection with the defense and settlement of the infringement litigation and those normally incident to the negotiation, execution and

implementation of a bulk purchase arrangement. At no time during that relationship, or at the signing of the varius papers concerninq the foregoing matters, did any representative of Squibb ever aqree in an express or tacit fashion with anybody at Bristol to fix or stabilize tetracycline prices or to restrict the entry of other firms into the broad spectrum market.

|64. There is no evidence at all in the entire record of this case with respect to even a single contact between Squibb and Cyanamid related in any manner to broad spectrum antibiotics. Absolutely no evidence has been adduced by plaintiff's counsel showinq that Squibb had any contact with Pfizer or Upjohn part from the defense (Upjohn) and settlement (Pfizer and Upjohn) of the infringement litigation. The only contacts in that connection evidenced by

the record occurred (1) when Squibb "needled" Mr. McKeen to settle the litiqation (Tr. 472-73), (2) when Squibb counsel participated with Upjohn counsel in qathering facts for the defense of the action and (3) when Squibb executives met at a conference table with Pfizer and Upjohn to execute the final settlement papers.

|65. Thus, not only is the record in this case devoid of any evidence that Squibb entered into any agreement or discussion with any other defendant concerning tetracycline pricing or monopolization of the broad spectrum market, but the only contacts between Squibb and other defendants evidenced by the record were those obviously required by business (bulk purchase) or legal (defense and settlement) considerations. Indeed, havinq neither the right nor the ability to

manufacture tetracycline, nor any material patent position in the broad spectrum market, Squibb was entirely unable to exclude any company from the market or, by any means, to contribute to any such exclusion. Consequently, none of its competitors had any incentive to conspire with Squibb for the purpose of limiting the number of firms in the broad spectrum market. And the uncontradicted testimony of each chief executive of every defendant confirmed without reservation or qualification that the subject of market restriction or of tetracycline pricing was never discussed on an intercompany basis with or by any representative of the Squibb organization.

166. (a) Far from indicating a conspiracy, the history of braod spectrum pricing demonstrates the independence of action exhibited by each defendant--and

certainly by defendant Squibb. The record shows that there are, broadly speaking, two markets in which broad spectrum antibiotics are sold--the prescription market and the hospital market--and that a different pricing pattern has developed in response to the distinct characteristics of each. For example, the nature of the retail pharmacy trade creates a market in which the independent business decisions of competing firms must, of economic necessity, produce uniform prices after initial declines. That, of course, has been the history of braod spectrum pricing.

(b) The nature of the hospital market is such that a gradual decrease in price should be the result of vigorous competition. Here again, the economists testified that one viewing that market objectively would expect to witness a pattern of uniform pricing broken

intermittently on large bids by seemingly minor price reductions which would cause a steadily deteriorating price. In fact, just such a pattern occurred in connection with hospital business: prices consistently declined without sharp breaks and typically by fractions of a cent at a time. Indeed, that pattern of price deterioration continued undiminished before and after Squibb entered the market, throughout the infringement action, during settlement negotiations and after final settlement to the end of the relevant period in this litigation.

167. In addition to evidence concerning the general price pattern of broad spectrum antibiotics, the record is clear that Squibb pricing policies were formulated and implemented with complete independence, in accordance with the economic characteristics of the markets in

which it sold and with the relatively weak position it occupied in the broad spectrum field. Of striking significance in that regard is the elaborate system of field intelligence maintained by Squibb to ascertain competitive trends. Of equal significance is the fact that every competitive action taken by Squibb was taken in response to the reports of its field personnel concerning the activities of its competitors. The record is devoid of evidence showing any conspiratorial contact between Squibb and any other defendant. On the other hand, the evidence shows quite plainly the existence of intense competition and demonstrates the manner in which Squibb reacted to that competition, with complete independence of action and without any communication with its rivals for broad spectrum business. That Squibb at no time became a party to

any concerted action-- and, indeed, that there was no such concerted action--cannot be demonstrated with greater clarity than by minutes of the Squibb management committee meetings and by Squibb correspondence to and from the field:

Exhibit	Date	Quotation
NCX 952	11/10/54	"It was recognized by all that Steclin will be in an intensively competitive area and our promotion group, as well as the field staff, will need all the strength we can give them."
NCX 816	11/18/54	"Mr. Heberger guesses that 80% of tetracycline is sold at published prices, disregarding free goods and samples distributed by competition. On this assumption we do not consider it

		possible to increase our volume substantially by engaging in price cutting...."
NCX 818	11/29/54	"Obviously, we see the pattern that is forming is one that matches the old Penicillin combat days."
SX 123	3/16/55	"At the moment we are not getting into a dog fight on this product and we will continue to bid our price of $22.49 net until further notice."
SX 165	10/5/55	"Naturally, we have despaired of meeting this type of competition."
NCX 952	11/2/55	"Tetracycline competition is very severe; we have numerous reports on Pfizer, Lederle and Bristol giving one free with one sold."
SX 181	11/17/55	"Upon this occasion, as we have upon so many previous occasions we did not institute but

rather we followed belatedly the price gyrations of responsible manufacturers who were quoting on antibiotics."

NCX 943 5/24/56

"Squibb is in no position to take a dominating stand in the Tetracycline field, and we feel that the decision to stay within the prescribed framework is a good one under the circumstances."

SX 212 6/7/56

"Squibb because it is not a prime producer of Tetracycline would be crazy to upset this market by quoting below the regular schedule on a direct bid....

"It is my own personal opinion that other manufacturers of Tetracycline products are giving some under the table discounts beyond the regular 10%. It is hard for me to believe that the dealers

are handling the Tetracycline business at a price which practically eliminates any profit they might make. Here again Squibb because of its position cannot afford to give an extra discount."

SX 291 12/12/57

". . . Pfizer always works an 'angle' on these VA bids....

"We have decided that we are not going to indulge in these practices and it is my personal opinion that this course, in the long run, is the wisest. I know at times it is difficult for a representative who sees this business going to Pfizer to accept this without questioning the wisdom of our position. But the alternative is a good possibility of a major price war with the inevitable effect of drastically reduced prices (including

		Mysteclin) and that would be bad."
SX 293	12/19/57	"...Pfizer got the Tetracycline business through the Interbay Pharmacy who cut the price. As you know we are not getting into this dog fight."
SX 303	2/10/58	"We are fully aware of this situation and have been for some time. Our executives simply refuse to allow us to meet this price. I can't help but go along with their thinking. I am sure you will agree too that volume without normal profit is of little significance."

CONCLUSIONS OF LAW

On the basis of the findings of fact herein stated the court concludes as a matter of law

1. That plaintiff has failed to establish by a preponderance of the evidence that defendants Pfizer and Cyanamid, during the fall of 1953; defendants Bristol, Squibb and Upjohn, during the late summer and early fall of 1954; and all defendants during late fall and early winter of 1955 entered into contracts, combinations, agreements, understandings or conspiracies to restrain trade and commerce in the manufacture, distribution and sale of the broad-spectrum antibiotic tetracycline, its analogues and combination products containing tetracycline by fixing and maintaining the prices of tetracycline and/or limiting the number of manufacturers of tetracycline and

its analogues to the five defendants named herein in violation of Section 1 of the Sherman Act, 15 U.S.C. Sec.1.

2. That the plaintiff has failed to establish by a preponderance of the evidence that Pfizer and Cyanamid, during the fall of 1953; defendants Bristol, Squibb and Upjohn during the late summer and early fall of 1954; and all defendants during late fall and early winter of 1955 entered into contracts, combinations, agreements, understandings and conspiracies to monopolize, and actually monopolize the manufacture, distribution and sale of tetracycline, its analogues and combination products containing tetracycline or its analogues in violation of Section 2 of the Sherman Act, 15 U.S.C. Sec.1.

3. That the plaintiff has failed to establish by a preponderance of the evidence that the defendant Pfizer

attempted to or actually monopolized the manufacture, distribution and sale of tetracycline by fraudulent procurement or misuse of the Conover patent in violation of Section 2 of the Sherman Act, 15 U.S.C. Sec.2; and

4. That upon the facts and the law the plaintiff has shown no right to relief under the antitrust laws against the defendants herein or either of them, and the claims of the plaintiffs and of the class members represented by the plaintiff, State of North Carolina, must be dismissed as to all defendants.

Accordingly, it is directed that judgment of dismissal be entered.

THE STATE OF NORTH CAROLINA, PLAINTIFF

v.

CHAS. PFIZER & CO., INC.,
AMERICAN CYANAMID COMPANY,
BRISTOL-MYERS COMPANY,
OLIN MATHIESON COMPANY,
and
THE UPJOHN COMPANY, DEFENDANTS

CIVIL NO. 2287

JUDGMENT

For the reasons stated in the court's memorandum of decision this day filed it is now

ORDERED, ADJUDGED AND DECREED that the plaintiffs are not entitled to recover of the defendants, or either of them, and that this action be and the same is hereby dismissed. Let the plaintiff pay the costs.

_____
F. T. DUPREE, JR.
UNITED STATES DISTRICT JUDGE

June 25, 1974

APPENDIX D

UNITED STATES CODE, TITLE 15:

§1. Trusts, etc., in restraint of trade illegal; exception of resale price agreements; penalty.

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.

§2. Monopolizing trade a misdemeanor; penalty.

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding fifty thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discre-

tion of the court.

§15. Suits by persons injured; amount of recovery.

Any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor in any district court of the United States in the district in which the defendant resides or is found or has an agent, without respect to the amount in controversy, and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.

§16. Judgment in favor of Government as evidence; suspension of limitations.

(a) A final judgment or decree heretofore or hereafter rendered in any civil or criminal proceeding brought by or on behalf of the United States under the antitrust laws to the effect that a defendant has violated said laws shall be prima facie evidence against such defen-

dant in any action or proceeding brought by any other party against such defendant under said laws or by the United States under section 15a of this title, as to all matters respecting which said judgment or decree would be an estoppel as between the parties thereto: Provided, That this section shall not apply to consent judgments or decrees entered before any testimony has been taken or to judgments or decrees entered in actions under section 15a of this title.

(b) Whenever any civil or criminal proceeding is instituted by the United States to prevent, restrain, or punish violations of any of the antitrust laws, but not including an action under section 15a of this title, the running of the statute of limitations in respect of every private right of action arising under said laws and based in whole or in part on any matter com-

plained of in said proceeding shall be suspended during the pendency thereof and for one year thereafter: Provided, however, That whenever the running of the statute of limitations in respect of a cause of action arising under section 15 of this title is suspended hereunder, any action to enforce such cause of action shall be forever barred unless commenced either within the period of suspension or within four years after the cause of action accrued.

FEDERAL RULES OF CIVIL PROCEDURE:

Rule 52. Findings by the Court.

(a) Effect. In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set

forth the findings of fact and conclusions of law which constitute the grounds of its action. Requests for findings are not necessary for purposes of review. Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. If an opinion or memorandum of decision is filed, it will be sufficient if the findings of fact and conclusions of law appear therein. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41 (b).

APPENDIX E

FILE COPY NO. 87
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E-1

Nos. 15,805, 15,797, 15,801, 15,806, 15,788

IN THE

United States Court of Appeals

FOR THE SIXTH CIRCUIT

AMERICAN CYANAMID COMPANY, *Petitioner,* *v.* FEDERAL TRADE COMMISSION, *Respondent.*	No. 15,805
BRISTOL-MYERS COMPANY and BRISTOL LABORATORIES INC., *Petitioners,* *v.* FEDERAL TRADE COMMISSION, *Respondent.*	No. 15,797
CHAS. PFIZER & CO., INC., *Petitioner,* *v.* FEDERAL TRADE COMMISSION, *Respondent.*	No. 15,801
OLIN MATHIESON CHEMICAL CORPORATION, *Petitioner,* *v.* FEDERAL TRADE COMMISSION, *Respondent.*	No. 15,806
THE UPJOHN COMPANY, *Petitioner,* *v.* FEDERAL TRADE COMMISSION, *Respondent.*	No. 15,788

JOINT BRIEF FOR PETITIONERS
Concerning The Disqualification Of Chairman Dixon

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April 7, 1965

STATEMENT OF QUESTION INVOLVED

Are the Decision and Order of the Federal Trade Commission entered in the present proceeding void because of the participation therein, over repeated and timely objections by petitioners, of Chairman Dixon, who, in his former capacity as Chief Counsel and Staff Director of the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary of the United States Senate, played an admittedly "active role" in an investigation by that Subcommittee of the same facts, issues and parties as are involved in such proceeding and participated in the preparation of the Subcommittee's report on the same facts, issues and parties?

Chairman Dixon and the Commission answered: "No".

Petitioners contend: "Yes".

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Question: Are the Decision and Order of the Federal Trade Commission entered in the present proceeding void because of the participation therein, over repeated and timely objections by petitioners, of Chairman Dixon, who, in his former capacity as Chief Counsel and Staff Director of the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary of the United States Senate, played an admittedly "active role" in an investigation by that Subcommittee of the same facts, issues and parties as are involved in such proceeding and participated in the preparation of the Subcommittee's report on the same facts, issues and parties?	11
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133 (1955), *United States* v. *Vasilick*, 160 F. 2d 631 (3d Cir. 1947), *United States* v. *Maher*, 88 F. Supp. 1007 (D. Me. 1950). Actual bias (although itself a ground for disqualification) need not be shown; the rule is intended to avoid even the appearance of unfairness. As Mr. Justice Black declared in the *Murchison* case, *supra*, at 136:

> "A fair trial in a fair tribunal is a basic requirement of due process. Fairness of course requires an absence of actual bias in the trial of cases. But our system of law has always endeavored to prevent even the probability of unfairness. To this end no man can be a judge in his own case and no man is permitted to try cases where he has an interest in the outcome. That interest cannot be defined with precision. Circumstances and relationships must be considered. This Court has said, however, that 'every procedure which would offer a possible temptation to the average man as a judge . . . not to hold the balance nice, clear and true between the State and the accused, denies the latter due process of law.' *Tumey* v. *Ohio*, 273 U. S. 510, 532. Such a stringent rule may sometimes bar trial by judges who have no actual bias and who would do their very best to weigh the scales of justice equally between contending parties. But to perform its high function in the best way 'justice must satisfy the appearance of justice.' *Offutt* v. *United States*, 348 U. S. 11, 14."

The rules on disqualification are no less applicable to administrative agencies. "Indeed, if there is any difference, the rigidity of the requirement that the trier be impartial and unconcerned in the result applies more strictly to an administrative adjudication where many of the safeguards which have been thrown around court proceedings have, in

CONCLUSION

For the foregoing reasons, Chairman Dixon was disqualified to participate in adjudication of the instant proceeding, and, therefore, the Commission's Findings as to the Facts and Conclusions of Law and Order are void because of his participation therein. The relief sought by petitioners in this Court is set forth in their respective separate briefs previously referred to.

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2
DIVISION OF APPEALS

E-8

IN THE

United States Court of Appeals

FOR THE SIXTH CIRCUIT

No. 15,801

CHAS. PFIZER & CO., INC.,
Petitioner,

v.

FEDERAL TRADE COMMISSION,
Respondent.

MAIN BRIEF OF CHAS. PFIZER & CO., INC.

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STATEMENT OF QUESTIONS INVOLVED

1. Are the Findings and Conclusions of the Federal Trade Commission based on that degree of "substantial evidence" which is required to justify its reversal of the Hearing Examiner's Initial Decision?

The Commission answered "Yes".
We contend the answer should be "No".

2. Where the findings in issue involve fraud, is a higher degree of proof required to justify a reversal of the Hearing Examiner, and if so, has such standard of proof been met?

The Commission glossed over these questions. We contend the answer to the first part should be "Yes", and to the second part "No".

3. Does the Federal Trade Commission have jurisdiction to indirectly attack the validity of a patent and second-guess the actions of the United States Patent Office?

The Commission answered this question "Yes", while insisting it was not attacking the patent. We contend the answer should be "No", and that the Commission in effect held the patent was invalid and should be cancelled for fraud.

4. Has Pfizer's constitutional right to due process of law been violated because the Patent Examiner, who was allegedly deceived by Pfizer, was held incommunicado by the Commissioner of Patents throughout the proceedings, while the Commissioner cooperated with complaint counsel and instructed another official of the Patent Office to testify as to what information he thought the Patent Examiner had sought from Pfizer?

The Commission answered this question "No". We contend the answer should be "Yes".

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and valid in law, and its claims clearly define a patentable invention of great importance in the medical field. (35 U. S. C. Sec. 112)"

The above findings and conclusions of the District Court are on all fours with those of the Hearing Examiner in his Initial Decision herein, and are flatly inconsistent with those of the Commission.

Where the Findings in issue involve fraud, is a higher degree of proof required to justify a reversal of the Hearing Examiner, and if so, has such standard of proof been met?

The Commission glossed over these questions. We contend the answer to the first part should be **"Yes"**, and to the second part **"No"**.

2. THE COMMISSION'S FINDINGS OF FRAUD MUST BE, BUT ARE NOT, SUPPORTED BY EVIDENCE WHICH IS "CLEAR, UNEQUIVOCAL AND CONVINCING"

The Commission has mistakenly assumed that it may arbitrarily discard the Initial Decision of the Hearing Examiner if it has what it considers to be any "evidence" to support its contrary views. As we have demonstrated in the preceding section, its findings must be supported by "substantial evidence", with due allowance for all the countervailing evidence. Where the findings are directed to fraud, as here, the substantial evidence required to support them must meet a higher standard than for the conventional findings of an administrative agency.

The law is clearly to the effect that the Commission's findings of fraud must be supported by competent evidence which is "clear, unequivocal and convincing". Such evidence must establish each of the following facts:

1. The Patent Examiner (Lidoff) wanted certain information regarding the coproduction of tetracycline when Aureomycin was produced in accordance with the prior art;

petitioners to similar problems were only "the result of a strong and informed competition."*

RELIEF

For the foregoing reasons and for those stated in the joint brief submitted herewith, the Commission's order should be set aside and the case remanded to the Commission with instructions to dismiss the complaint.

Respectfully submitted,

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Dated: April 20, 1965

*United States v. National Malleable & Steel Castings Co., *supra*, at 73,593.

IN THE

United States Court of Appeals

FOR THE SIXTH CIRCUIT

No. 18,337

AMERICAN CYANAMID COMPANY,
Petitioner,

v.

FEDERAL TRADE COMMISSION,
Respondent.

ON PETITION TO REVIEW AND SET ASIDE AS TO PETITIONER AN ORDER OF THE FEDERAL TRADE COMMISSION

PETITION OF CYANAMID FOR REHEARING

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FOR THE SIXTH CIRCUIT

No. 18,337

AMERICAN CYANAMID COMPANY,

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v.

FEDERAL TRADE COMMISSION,

Respondent.

ON PETITION TO REVIEW AND SET ASIDE AS TO PETITIONER AN ORDER OF THE FEDERAL TRADE COMMISSION

PETITION OF CYANAMID FOR REHEARING

Pursuant to Rule 40 of the Federal Rules of Appellate Procedure, petitioner American Cyanamid Company ("Cyanamid") hereby petitions for rehearing. We respectfully submit that in the Opinion of September 30, 1968 (hereafter cited as "Op.") the Court overlooked certain highly significant matters particularly relating to Cyanamid.

The "basic question," as stated by the Court, was whether Pfizer and Cyanamid made misrepresentations to Patent Examiner Lidoff and withheld information, "thereby deceiving him into granting a patent on tetracycline which otherwise would never have been approved" (Op., p. 4). In 1966, the 1963 decision of the Commission that Mr. Lidoff had been so deceived was held not to be supported by substantial evidence on the record as it then stood (363 F.2d at 779). The Commission's decision against Cyanamid after the remand was based (175s) on testimony by Lidoff, which was the only evidence as to Cyanamid added to the record previously held inadequate. The testimony (233s) relied upon was to the effect that if Cyanamid had disclosed to Mr. Lidoff, prior to the dissolution of the

APPENDIX F

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IN THE

United States Court of Appeals

FOR THE SIXTH CIRCUIT

No. 15,805

AMERICAN CYANAMID COMPANY,
Petitioner,
v.
FEDERAL TRADE COMMISSION,
Respondent.

No. 15,801

CHAS. PFIZER & CO., INC.,
Petitioner,
v.
FEDERAL TRADE COMMISSION,
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CHRONOLOGY OF PRINCIPAL EVENTS RELATING TO THE PATENT ASPECTS OF THE COMMISSION'S DECISION AS TO PFIZER AND CYANAMID

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United States Court of Appeals

FOR THE SIXTH CIRCUIT

No. 15,805

AMERICAN CYANAMID COMPANY,

Petitioner,

v.

FEDERAL TRADE COMMISSION,

Respondent.

No. 15,801

CHAS. PFIZER & CO., INC.,

Petitioner,

v.

FEDERAL TRADE COMMISSION,

Respondent.

CHRONOLOGY OF PRINCIPAL EVENTS RELATING TO THE PATENT ASPECTS OF THE COMMISSION'S DECISION AS TO PFIZER AND CYANAMID

The following chronology is submitted for the assistance of the Court in following the somewhat complex events relating to the patent aspects of the case. It is intended and believed to be an objective statement, including events relied on by the Commission as well as those relied on by Pfizer or Cyanamid. Citations to the record are given, and whenever possible, the citations are to the Commission's decision and/or Commission exhibits. When there

are conflicting positions of the Commission and of a petitioner with respect to an event, this is stated and, if possible, the substance of the conflicting positions is briefly described.

Date	Event
December 1, 1948	Aureomycin, the commercial form of the antibiotic* substance chlortetracycline,** was introduced by Cyanamid. It was the first of the broad spectrum antibiotics, effective against a far wider range of bacteria than earlier antibiotics such as penicillin and streptomycin, being effective against both Gram-positive and Gram-negative bacteria. (494a-95a, 542a, 9136a)
September 13, 1949	The Duggar patent (U. S. Patent No. 2,482,055), containing claims to the product chlortetracycline (called "aureomycin" in the patent) and processes for its preparation, was issued to Cyanamid. The patent describes the microorganism, *S. aureofaciens,* discloses means of producing chlortetracycline by growing a culture of *S. aureofaciens* in a nutrient medium under prescribed conditions, and states that sample cultures of it have been deposited with the Fermentation Division of the Northern Regional Research Laboratory at Peoria, Illinois and

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* Antibiotics are chemical substances produced by certain microorganisms and have the capacity to destroy or inhibit the growth of infectious or disease-producing microorganisms (494a).

** "Chlortetracycline" is the generic name for the antibiotic substance discovered by Dr. Duggar of Cyanamid. "Aureomycin" was its original generic name and is the trade name used by Cyanamid for the commercial form of chlortetracycline.

given the identifying number of "NRRL-2209"*. (496a, 579a-80a, 5003a-07a)

July 18, 1950

The Sobin patent (U. S. Patent No. 2,516,080) claiming the antibiotic product oxytetracycline and a fermentation process for its preparation was issued to Pfizer. The product had been introduced on the market by Pfizer under the trade name "Terramycin," in March 1950. (493a, 578a, 6835a)

Spring, 1952

A Pfizer research team of scientists, including Doctors L. H. Conover and C. R. Stephens, working with an outside consultant, Dr. R. B. Woodward, ascertained the chemical structures of chlortetracycline (Aureomycin) and oxytetracycline (Terramycin), which proved to be very similar. (498a, 581a-82a)

June, 1952

Dr. Lloyd H. Conover of the Pfizer research team, noting the similarity in the chemical structures of chlortetracycline and oxytetracycline, speculated that it might be possible to develop a new antibiotic by removing the chlorine atom from chlortetracycline. Dr. Conover succeeded in making this antibiotic (tetracycline) on June 27, 1952 by hydrogenating chlortetracycline under specially controlled conditions developed by him. This process resulted in replacing the chlorine atom with a hydrogen atom, called deschlorination. (498a, 583a, 1621a-31a)

---

* This NRRL-2209 strain was the only strain of *S. aureofaciens* available to the public as "prior art" before Dr. Conover's later discovery of tetracycline.

September 2, 1952

The Niedercorn patent (U. S. Patent No. 2,609,329), which is an improvement patent on the Duggar fermentation process for producing chlortetracycline, using certain media which produce higher yields of chlortetracycline, was issued to Cyanamid (497a, 5008a-14a). The technician who preformed the experiments described in the Niedercorn patent testified that the publicly deposited strain of *S. aureofaciens,* NRRL-2209, was not used in them, but that a later-developed strain was used (2402a-05a).

October 5, 1952

An article written by the Pfizer research team was published in the October 5, 1952 issue of the *Journal of the American Chemical Society.* The article which had been submitted to the *Journal* by Pfizer on August 8, 1952, is known as the "Stephens article." It disclosed the structures of chlortetracycline, oxytetracycline, and referred to a structure common to them which was later named tetracycline, although it did not disclose how tetracycline could be made.* (498a, 583a, 10,496a-97a)

October 23, 1952

Pfizer filed the Conover application for a patent claiming the product tetracycline (called deschloroaureomycin at that time), its salts and a process for producing it by the deschlorination of chlortetracycline. (498a-99a, 5144a-51a)

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* Under 35 U.S.C. §102(a) and (b), an invention is not patentable to a patent applicant if it was described in a printed publication before the invention thereof by the applicant, or more than one year prior to the date of the application for a patent.

December, 1952-January, 1953

Cyanamid performed some experiments with hydrogenation of chlortetracycline, reviving experiments which had been conducted in 1948 under conditions different from those later developed by Conover, but which were subsequently abandoned. In December, 1952, or January, 1953, Dr. James Boothe of Cyanamid produced tetracycline by hydrogenation of chlortetracycline. (499a, 2462a-64a)

March 16, 1953

Cyanamid filed the Boothe-Morton application for a patent on tetracycline, its salts, and a process for producing it by deschlorinating chlortetracycline. (499a, 5082a, ff.)

May 29, 1953

Dr. Minieri and others, of the Heyden Chemical Corporation produced by a direct fermentation process an antibiotic called "HA20A" by Heyden, which was later identified as tetracycline. (501a, 584a)

July, 1953

Pharmacological and clinical tests conducted by Cyanamid in the first half of 1953 showed that tetracycline was more stable than Aureomycin, was absorbed in the body better and gave higher blood levels and that it did not produce the toxic side effects of Aureomycin. Having conducted these tests showing the superiority of tetracycline, Cyanamid had decided by July 1953 that it would market tetracycline as its principal antibiotic, replacing

Aureomycin. (500a, 2285a-87a, 2415a, 2421a, 2424a-34a, 3307a-20a, 7957a, 7504a)

September 20, 1953

The *Journal of the American Chemical Society* published articles previously submitted by Cyanamid on August 6, 1953, and by Pfizer on August 13, 1953, each of which separately described its production of tetracycline by the deschlorination of chlortetracycline. These disclosures made possible the testing of previously unknown and unrecognized antibiotics, using the revealed tetracycline as a basis for comparison. (499a)

September 25, 1953

Heyden announced that it had discovered an antibiotic, designated HA-20A, which might be tetracycline, and that this antibiotic could be produced by direct fermentation. This announcement, which related to Minieri's earlier discovery (see May 29, 1953), was the subject of an article which appeared in the *Journal of Commerce* on October 1, 1963. (501a)

September 28, 1953

The Minieri application for a patent on tetracycline, its salts, and a process for producing it by direct fermentation in media low in chlorides was filed by Heyden. This application disclosed that the microorganism used in the fermentation process was a strain of *S. aureofaciens* and a mutant thereof, and that chlortetracycline and tetracycline were co-produced in its tetracycline fermentation processes. Methods for recovering the tetracycline from the fermentation broths in a purity in excess of 95% were described. (501a-02a, 514a, 584a, 515a ff.)

October, 1953

The president of Heyden contacted Cyanamid with a view to selling Heyden's Antibiotic Division to Cyanamid and the parties entered into negotiations for such a sale. (502a, 2313a-2315a)

October 9, 1953

Pfizer filed a continuation of the original Conover application.* The basic purpose of this was to change the name of the product from "deschloroaureomycin" to "tetracycline". (5019a-28a)

October 15, 1953

Cyanamid scientists had discovered that tetracycline could be produced by direct fermentation by using certain strains of *S. aureofaciens,* and on October 15, 1953, Cyanamid filed its Martin-Bohonos application for a patent claiming processes for producing tetracycline by direct fermentation. (584a, 502a, 5921a ff.)

October 19, 1953

Bristol filed its Heinemann application for a patent on the product tetracycline and a process of producing it by direct fermentation. The application described the microorganism used as a new species and tentatively called it *"Streptomyces BL 567201".*** (504a, 586a, 5254a ff.)

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* A continuation is a second application for an invention claimed in a prior application and filed before the original has been abandoned. *Manual of Patent Examining Procedure,* Sec. 201.07.

** Bristol later conceded that the species of microorganism it used in producing tetracycline by fermentation was *S. aureofaciens* or its "legal equivalent" (6376a-77a).

October 29, 1953

Patent Examiner Lidoff rejected both the product and process claims in the Minieri application. Lidoff rejected Minieri's fermentation process claims on the ground that the production of tetracycline as well as varying amounts of chlortetracycline "would appear to be inherent" in the Duggar fermentation process.* The examiner also rejected Minieri's product claims, but not on the ground of inherent production, the claims being rejected on the basis of the Stephens article (see p. 4, *supra*) which had referred to a structure later called tetracycline before the date of Minieri's application. Lidoff notified Minieri that to be entitled to a product claim on tetracycline for interference purposes, Minieri would have to show that his discovery of tetracycline was made before the submission date of the 1952 Stephens article.** (504a, 585a, 5213a-14a)

October 29, 1953

On the same day that Patent Examiner Lidoff rejected the claims of the Minieri application, he issued notices to copy claims to Conover (Pfizer) and Boothe-Morton (Cyanamid), for a proposed interference on the product tetracycline and the deschlorination process of producing it.*** (505a, 585a, 2473a, 5041a, 5111a)

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* The examiner regularly uses "rejections" as a means of determining what constitutes the patentable subject matter. These rejections are designed to elicit responses in the form of arguments or proof with a view to resolving the issues (2470a-71a).

** The bar to patentability resulting from a prior publication, under 35 U.S.C. §102(a) and (b) has been noted, *supra,* p. 4, fn.

*** Under Patent Office rules, an interference is a proceeding conducted for the purpose of determining priority of invention between two or more applicants claiming the same patentable invention (505a; Patent Office Rule 201(a)).

November 4, 1953

Cyanamid made a contract to acquire the Antibiotic Division of the Heyden Chemical Corporation, including the rights to the Minieri patent application. (502a, 2315a)

November, 1953

In early November 1953, McKeen, president of Pfizer, having reason to believe that Cyanamid was the other party to the proposed interference on tetracycline*, visited Malcolm, then general manager of Cyanamid's Lederle Laboratories Division, to discuss a possible settlement of the proposed interference (505a). At this and a second meeting held about a week later, licensing agreements between Pfizer and Cyanamid were negotiated, to become effective after the proposed interference had been declared (510a, 2068a-79a, 2291a-2300a). Under these agreements (a) the interference was to be settled on the basis of an exchange of evidence of priority, with the question to be resolved by the Patent Office in case of dispute, and either party obtaining a patent covering tetracycline and/or the deschlorination process was to grant the other a non-exclusive license (6321a-39a), and (b) Cyanamid licensed Pfizer non-exclusively under its chlortetracycline patents to make chlortetracycline for the production of tetracycline by deschlorination (6306a-20a), each license being at a royalty of 2½% of the licensee's net sales (510a). Cyanamid was to furnish Pfizer with know-how as to the production of chlortetracycline for use in making tetracycline (510a, 6307a, 6316a). At the insistence of

* McKeen had seen Cyanamid's article in the *Journal of the American Chemical Society* dated September 20, 1953, (*supra* p. 6), describing the deschlorination process, and had received a notice to copy claims for an interference on this process (2069a, 2071a).

McKeen, Malcolm also agreed to furnish Pfizer with a supply of bulk tetracycline so that Pfizer could begin to sell more quickly (2297a-98a).

November 16, 1953

Cyanamid began selling tetracycline on the market under the trade name "Achromycin". (510a, 544a)

November 16, 1953

Edelblute, patent counsel for Cyanamid, had a meeting with Patent Examiner Lidoff concerning Cyanamid's Boothe-Morton application and a requirement imposed by Lidoff in the notice to copy claims, that if Boothe-Morton were to qualify for the proposed interference, Cyanamid must "swear back" of the Stephens article, i.e., show by affidavit that the invention had been completed before the article. Edelblute had prepared an amendment and affidavit for this purpose and at this meeting discussed them with Lidoff. (507a, 2473a-2478a) At the conclusion of this meeting, Lidoff asked Edelblute whether strains of *S. aureofaciens* used by Cyanamid in the production of Aureomycin might have produced quantities of tetracycline (2478a). Edelblute replied he did not know but would try to find out and let Lidoff know. (507a, 2473a-79a, 5126a-29a)

December 1, 1953

Cyanamid took possession of the assets of Heyden's Antibiotics Division, including the Minieri patent application which it then saw for the first time. (2316a, 2488a, 7395a)

December 4, 1953

Bristol filed its Lein application for a patent claiming a fermentation process for producing tetracycline, stating that either a microorganism identified as "Streptomyces BL-567201," or *S. aureofaciens,* could be used in its process. (7664a ff.)

December 4, 1953

Edelblute filed an amendment to Cyanamid's Boothe-Morton application, with remarks regarding questions raised by the patent examiner during their interview of November 16, 1953. Three pages (5126a-28a) of the paper dealt with questions as to Cyanamid's affidavit "swearing back" of the 1952 Stephens article, which had been raised by Lidoff at the interview. On one page (5129a) Edelblute answered Lidoff's inquiry as to Cyanamid's production of tetracycline in making Aureomycin, in remarks indicating that, except for disclosures in recent applications before Lidoff (e.g., Martin-Bohonos and Minieri, *supra,* pp. 6, 7), none had been produced (2492a-93a). The Commission relies upon these remarks in its decision, where they are quoted at 507a-08a. Edelblute testified that his answer was based on Cyanamid's knowledge at that time, which he gained from information given him by Cyanamid scientists after the November 16 interview with Lidoff (2489a), and his knowledge of a technical paper delivered by two Cyanamid scientists in 1950 (before tetracycline was known), which stated that examination of Aureomycin broths had shown no antibiotic other than Aureomycin (7948a). The record includes as exhibits this paper and reports that in October 1953, some retained samples of Aureomycin had been

tested by Cyanamid, and no tetracycline had been found (6359a, 7951a ff.).

December 8, 1953

Patent Examiner Lidoff rejected both the tetracycline process and the product claims in Bristol's Heinemann application as "unpatentable over each of Duggar and Niedercorn since it appears, from the processes thereof, that applicants' product must be produced inherently" (5283a).* He also rejected Heinemann's product claims on the ground that they had been anticipated by the Stephens article (5284a-85a).

December 11, 1953

Examiner Lidoff rejected tetracycline process and product claims in Cyanamid's Martin-Bohonos application. Lidoff rejected the process claims on the ground that the production of tetracycline "would appear to be inherent" in the processes of Duggar and Niedercorn, but rejected the product claim only on the ground of anticipation by the 1952 Stephens article. (5947a)

December 28, 1953

Lidoff declared the previously proposed interference (referred to as the "first interference") on tetracycline and the deschlorination process, between Pfizer's Conover application and Cyanamid's Boothe-Morton application. (588a, 5044a, 5141a)

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* Later, on March 19, 1954, the Heinemann product claims were rejected on grounds which did not include inherent production by the prior processes. (See p. 16, *infra.*)

December, 1953

In the latter part of December, 1953, some scientific personnel at Cyanamid reported verbally that they had ascertained qualitatively, but not quantitatively, that old samples of commercial Aureomycin did contain some tetracycline (footnote 655a, 6358a, 6359a). In earlier tests of Aureomycin samples, no tetracycline had been observed (6359a).

January 11, 1954

Formal written patent licensing and priority settlement agreements embodying the results of the Cyanamid-Pfizer negotiations relating to the interference which had begun in November, 1953, when it appeared there would probably be an interference, were executed (6306a-39a). The interference settlement agreement recited that each of the parties wished to be assured that it would not be prevented from making, using or selling tetracycline, by patents which might issue to the other on existing inventions covering tetracycline and/or the deschlorination process (6322a).

January, 1954

Subsequent to the execution of their agreement on January 11, 1954, Pfizer and Cyanamid, as agreed to, exchanged proofs for the purpose of ascertaining which had priority on the discovery of tetracycline. After review of each other's proofs, Cyanamid conceded priority to Pfizer. (511a, 1646a-51a, 2497a-2511a)

January 15, 1954

Pfizer began selling tetracycline under the trade name of "Tetracyn" on January 15, 1954. (544a, 6842a)

January 15, 1954

Bristol filed a continuation-in-part application,* seeking a patent on tetracycline hydrochloride and other salts, as distinguished from tetracycline. (587a-88a, 5329a-56a)

February 2, 1954

Cyanamid filed in the Patent Office a concession of priority of invention of tetracycline and the deschlorination process by Pfizer, in the interference between Cyanamid's Boothe-Morton application and Pfizer's Conover application. (511a, 5156a-57a)

February 3, 1954

Bristol filed an amendment and answer to the Patent Office December 8, 1953 rejections of its original Heinemann application (as distinguished from the continuation-in-part filed January 15, 1954). In these papers counsel for Bristol stated that there was nothing in the Duggar and Niedercorn patents "to support the conclusion drawn by the Examiner, namely that Applicant's product must be produced inherently in carrying out the process of the cited patents. * * *", and that there was "'not the slightest suggestion in the patents that their processes will result in the production of the antibiotic (tetracycline) covered by these claims". (5292a)

February 8, 1954

The Examiner notified Bristol that he proposed to declare an interference on tetracycline hydrochloride. (588a, 5359a)

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* A continuation-in-part is an application filed by an applicant which repeats part or all of his earlier application and adds matter not disclosed in that application. *Manual of Patent Examining Procedure*, Sec. 201.08.

February 9, 1954

The interference between Cyanamid's Boothe-Morton application and Pfizer's Conover application was terminated as a result of the concession of priority by Cyanamid, and three days later the patent examiner rejected the claims in Cyanamid's Boothe-Morton application. (511a, 5043a, 5140a, 5142a, 5155a, 5155a-57a)

February 19, 1954

Examiner Lidoff notified Edelblute, counsel for Cyanamid's Minieri application, that he found a claim for tetracycline hydrochloride allowable for purposes of interference, and suggested that such a claim could be made in the Minieri application.* On February 25, 1954, a claim for tetracycline hydrochloride was added by Minieri and an interference was requested. (5218a-19a)

February 25, 1954

On February 25, 1954, Dr. Bohonos, Cyanamid Director of Mycology Research, sent a memorandum to Dr. J. Williams, Cyanamid Director of Chemical and Biological Research, Lederle Laboratories Division, which contained the information that tests of some old samples of Aureomycin which had been produced in 1948, before commercial introduction of Aureomycin, showed they contained one to six percent tetracycline. Copies of this memorandum were addressed to several Cyanamid scientific personnel,

* Pfizer's patent attorney, Mr. Hutz, had told Edelblute about the fact that a second interference might be declared, and Edelblute had persuaded Lidoff to include Cyanamid in the proceeding (512a-13a).

and to Edelblute.* Written on the memorandum (which Cyanamid produced from its files in 1958 pursuant to Commission subpoena) were the words "All copies ret'd and destroyed". (509a, 6421a)

March 2, 1954

Examiner Lidoff declared an interference (herein referred to as the "second interference") on tetracycline hydrochloride, between Cyanamid's Minieri application, Bristol's Heinemann continuation-in-part application and Pfizer's Conover application. (513a, 5401a-02a)

[NOTE: The second interference proceedings continued over a period from March 2, 1954 until October 14, 1954, when the interference was dissolved. During this period, a total of eleven motions were filed by the parties. The record of this interference consists of over 500 pages (5399a-5902a). The more important events during the interference relating to the patent aspects of the appeals herein will be separately listed below. A summary of the more important motions of the parties appeared in the Hearing Examiner's Initial Decision, at 154a-55a.]

March 19, 1954

Examiner Lidoff issued a final rejection of the product claims in Bristol's *original* Heinemann application (as distinguished from its later continuation-in-part application, *supra*, p. 14). A number of grounds were given for this

* Edelblute testified that he did not remember seeing the memorandum until just prior to the FTC hearings in 1959, and that he had not learned of the presence of tetracycline in Aueromycin until December, 1954 (2511a-12a). The Hearing Examiner found this to be a fact (143a, 167a-68a), but the Commission stated that Edelblute "knew of or had ready access" to the information (656a).

rejection, but they did not include the ground of inherent production of tetracycline in the processes of the Duggar and Niedercorn patents, which had been a ground stated in the previous rejection of December 8, 1953*. (5301a-03a)

April 30, 1954

Bristol began to market tetracy[illegible], under the trade name "Polycycline". (544a, 6811a)

June 14, 1954

Cyanamid moved to add the Minieri fermentation process claims to the second interference. The Minieri process claims disclosed that *S. aureofaciens* fermentations concomitantly produced tetracycline and chlortetracycline in the fermentation broths, when low chloride media were used. In the motion, Cyanamid's counsel Edelblute made some statements which are quoted in the Commission's opinion (589a-90a) as denials of inherent production of tetracycline by processes of prior patents, but which Cyanamid contends were statements that the prior patents did not disclose such production. (5433a-36a)

August 23, 1954

Cyanamid filed a brief in support of its motion to add the Minieri fermentation process claims to the second interference, in which its patent counsel, Edelblute, argued that "speculation as to the probable inherent production of tetracycline in the Duggar or Neidercorn fermentation is not a proper basis for denying" the Minieri claims

* Under Patent Office Rule 113(b), a final rejection should include all grounds then considered applicable by the patent examiner.

(5782a), and made statements which the Commission claims (590a) were denials of inherent production but which Cyanamid contends were legal arguments (5783a). Edelblute testified that at the time when he made these statements he did not know that Aureomycin contained any tetracycline (2511a-12a).

August 23, 1954

Bristol filed a brief contending that neither the Duggar nor Niedercorn patents disclosed the coproduction of tetracycline with Aureomycin, and that "There is nothing in the prior art to suggest the production of, much less the recovery of tetracycline in a substantially pure state from a fermentation broth containing the antibiotic • • •." (5724a-25a)*

September, 1954

During September, 1954, Pfizer scientist, Dr. Fred Tanner, as part of a general research project to determine the production of tetracycline by various means of fermentation, had fermented the strain *S. aureofaciens* NRRL 2209 (samples of which had been publicly deposited by Cyanamid as part of its disclosure requirements in receiving the Duggar patent) in a medium described by the Commission as "a Niedercorn 28 medium", and found the resulting broths, with less than 10 micrograms per milliliter of potency, to be so poor in antibiotic potency that they were classified as containing neither chlortetracycline nor tetracycline (528a, 599a). Dr. Tanner testified that this experiment was a "simulation" of Example 28 of

* In February and March 1954, Bristol had made tests, known to its patent representatives, indicating the presence of small percentages of tetracycline in Aureomycin samples (6465a-79a, 3860a-61a).

the Niedercorn patent, that it omitted certain trace elements from the medium described in the patent, that he did not use Niedercorn's fermentation period, and that in this experiment he was not interested in reproducing Niedercorn's example precisely. (1800-02a)

September 29, 1954

Cyanamid sued Bristol for infringement of Cyanamid's Duggar patent. (514a, 2306a)

October 14, 1954

Examiner Lidoff, ruling on the 11 motions before him, dissolved the second interference on various grounds and, on his own motion, further ruled that tetracycline and its hydrocloride salt were unpatentable because from the disclosures of the Minieri application it appeared to Lidoff that in addition to chlortetracycline, tetracycline is also produced in the processes of the Duggar and Niedercorn patents, larger proportions being produced when the amount of the chloride in the fermentation medium is low* (5843a-44a). There is a dispute between the Comsion and petitioners as to the meaning to be attached to the language of Lidoff's decision and the grounds stated by him in his opinion. Basically, the Commission's position is that Lidoff regarded tetracycline as unpatentable if under the Duggar and Niedecorn processes any amounts of tetracycline had been produced which were "recoverable" in the sense of being capable of being separated from fermentation broths by any techniques, in clearly

* In his opinion Lidoff then cited page 1, lines 5-20, and 24-28 of the Minieri application, which refer to production of "high concentrations" and "good yields" of tetracycline, and that the resulting product has properties which make it a new and useful therapeutic product (5843a, bottom line).

identifiable form (643a). Petitioners contend, on the other hand, that Lidoff meant that tetracycline would be unpatentable if substantial enough amounts of tetracycline had been produced to be "recoverable" in the sense of being capable of being separated from broths in clearly identifiable form by practical recovery methods recommended for that purpose.

October 15, 1954

Dr. Francis X. Murphy, Pfizer patent agent, issued memoranda to two Pfizer scientists, Dr. Fred Tanner and Dr. Virgil Bogert, instructing them to conduct work on the question of coproduction of tetracycline with NRRL-2209, the strain of *S. aureofaciens* which had been deposited by Cyanamid in the Government's Northern Regional Research Laboratory. Murphy advised them that the work was in connection with the prosecution of the Conover application and that the results might be used in preparing affidavits for the Patent Office. Tanner was instructed to conduct fermentations with NRRL-2209 precisely in accordance with the examples set forth in the Duggar and Niedercorn patents and to have each fermentation broth checked for total broad spectrum antibiotic potency. Bogert was instructed to recover and purify the antibiotics present in Tanner's fermentation broths and to determine the total broad spectrum potency. Bogert was also instructed to determine the chlortetracycline and tetracycline content of the recovered products. (519a-20a, 6212a, 6215a)

October 21, 1954

About this date, Werner H. Hutz, Pfizer's outside patent counsel handling the Conover application, recom-

mended that the work requested by Murphy of Tanner and Bogert be stopped.* Dr. Bogert, however, continued the tests.** (521a-22a, 1681a-82a)

October 27, 1954

On October 27, 1954, Cyanamid's patent counsel Edelblute wrote a memorandum in which he stated that Examiner Lidoff's decision concerning the unpatentability of tetracycline because of inherent production was wrong and might ultimately be overturned. Some Cyanamid officials, other than Edelblute, however, were convinced after the dissolution of the second interference that no valid patent on the product tetracycline would be issued to any applicant by the Patent Office. (516a-17a, 2304a-05a, 2540a-46a, 7859a, 9144a-49a)

October-November, 1954

Pursuant to the original instructions given by Murphy, but without knowledge of Murphy or Hutz, Dr. Tanner prepared several fermentation broths with NRRL-2209, among which were two broths prepared in accordance with the specifications set forth in Example 1 of the Niedercorn patent. One of these broths had a bioassay potency of 74 micrograms per milliliter (calculated as chlortetracycline). Bogert applied a modified Pidacks procedure to this broth and obtained a number of fractions which were found by paper chromatography to contain tetracycline. Bogert's tests indicated that approxi-

* Hutz testified he recommended the work to be stopped because he did not know what information the patent examiner would require to overcome the rejection of the Conover claims (1757a).

** Hutz testified that he did not know until after the Conover patent issued in 1955, that some of the work had been continued (1682a).

mately 4% or 5% of the total antibiotic activity in the filtered broth consisted of tetracycline. Bogert did not attempt to isolate the tetracycline. There is a dispute between the Commission and Pfizer as to whether these experiments should have been disclosed to Examiner Lidoff at the time that the later experiments Pfizer performed for him were reported, i.e. on December 8, 1954. (522a, 528a, 597a-98a, 1675a-77a, 1681a-82a, 2006a-07a, 2020a-21a, 2040a, 5838a-39a, 5057)

November 24, 1954

Examiner Lidoff issued a rejection of the product claims of Pfizer's Conover application, Cyanamid's Minieri application and Bristol's Heinemann application, (each of which had returned to separate and secret *ex parte* prosecution after dissolution of the second interference) on the ground of inherent production of tetracycline in the processes disclosed in the Duggar and Niedercorn patents, in language substantially identical to that used by Lidoff in the dissolution of the second interference on the same ground. (516a, 5050a-51a, 5225a-26a, 5364a-65a)

November 29, 1954

Hutz and Murphy of Pfizer met with Examiner Lidoff concerning overcoming Lidoff's November 24, 1954 rejection of the Conover application on ground of coproduction of tetracycline in the Duggar and Niedercorn processes and what steps Pfizer could take in an attempt to overcome this rejection. In accordance with Patent Office practice, a summary of what transpired at the meeting was prepared by Hutz, filed in the Patent Office on December 8, 1954, and presented to Lidoff on the same date. There is a conflict between the Commission and Pfizer as

to whether Lidoff was misled by statements made at this interview, and as to what information Lidoff then requested of Pfizer's representatives. The summary shows that Lidoff advised Hutz and Murphy that to overcome his rejection he would require evidence that fermentation broths produced strictly in accordance with the Duggar disclosure and Example 28 of Niedercorn, using the deposited strain NRRL 2209, did not contain recoverable amounts of tetracycline, and that the absence of such amounts of tetracycline would have to be established by failure to recover tetracycline in clearly identifiable form according to methods then recommended for the separation of tetracycline from fermentation broths. (505a-06a, 523a-27a, 5053a-59a)

November-December, 1954

Immediately after the interview with Examiner Lidoff on November 29, 1954, Dr. Murphy notified Drs. Tanner and Bogert that tests were to be conducted for the Patent Office in which the precise conditions of the Duggar patent and Example 28 of the Niedercorn patent would be duplicated, to determine whether tetracycline could be recovered from fermentation broths produced with the NRRL-2209 strain of *S. aureofaciens* and the media described in the example in the Duggar patent and in Example 28 of the Niedercorn patent, using the preferred recovery procedures described in the Minieri, Bogert-Walsh, and Heinemann patent applications. Following these instructions, Tanner prepared two broths—one as representative of the example set forth in the Duggar patent and one as representative of the Niedercorn Example 28 broth using NRRL-2209.* The two test broths prepared by Tanner

* As noted *supra*, p. 4, Niedercorn had not used NRRL-2209 in his actual experiments for the patent.

were turned over to Bogert for recovery work. Bogert had the broths assayed by both biological and chemical assay methods which indicated they possessed low antibiotic potency. Bogert applied the recovery procedures described in the Minieri, Bogert-Walsh and Heinemann applications as he had been instructed by Murphy. Using these recovery methods, Bogert was unable to recover products clearly identifiable as tetracycline from the Tanner test broths. Affidavits were prepared by Tanner and Bogert describing the work they had performed, which were submitted to Examiner Lidoff on December 8, 1954. (528a-35a, 5060a-72a)

December 8, 1954

Murphy and Hutz met with Examiner Lidoff and submitted the Tanner-Bogert affidavits, an amendment adding seven new claims to the Conover application, together with their "Remarks" summarizing the November 29, 1954 conference and the results of the Tanner-Bogert tests. There is a conflict between the Commission and Pfizer as to whether the "Remarks" and affidavits were misleading and omitted material facts, or were accurate and complete. After examining the affidavits submitted, Examiner Lidoff requested further information (in affidavit form) as to the details of a test applied by Bogert to the crude amorphous materials he had recovered, and an explanation as to why no further efforts had been made to separate and recover identifiable tetracycline from those amorphous materials. (528a-35a, 5052a-75a)

December 9, 1954

Hutz and Murphy met with Examiner Lidoff on December 9, 1954 and submitted a supplemental affidavit by Bogert supplying the information Lidoff had requested at

the conference the preceding day. Bogert's supplemental affidavit recited that he had applied an acid color test which should have shown whether the crude amorphous materials recovered from one of Tanner's test broths contained 20 per cent or more tetracycline. There is a conflict between the Commission and Pfizer as to what Lidoff was told by a statement in it beginning "Assuming that the maximum possible proportion of the total potency due to tetracycline is 10%". (533a-35a, 5073a-79a)

December 9, 1954

At the conclusion of the interview, the patent examiner granted a notice of allowance of the Conover application to Pfizer.* (535a, 5080a-81a)

December, 1954

In mid-December 1954, Cyanamid and Bristol reached agreement, in principle, to settle the Cyanamid infringement suit against Bristol, and drafts were prepared. Under this agreement, Cyanamid would grant Bristol a license under Cyanamid's chlortetracycline patents to manufacture and sell tetracycline containing not more than 6 per cent chlortetracycline, paying a royalty of 3½% on net tetracycline sales. (514a, 535a-36a, 2306a-10a, 3456a-57a)

December, 1954

Cyanamid's patent counsel Edelblute was informed that tetracycline was present in Aureomycin.** (656a, 2511a)

* Such a notice is not available to anyone other than the applicant until a patent issues.

** Edelblute testified, and the Hearing Examiner found as a fact, that Edelblute did not learn of the presence of tetracycline in Aureomycin until December 1954 (2511a, 143a, 167a-68a). The Commission, however, stated in its opinion that Edelblute "knew of or had ready access" to such information prior to that time (656a).

January 3, 1955

Bristol filed with Patent Examiner Lidoff an affidavit by Dr. Taylor (called the "Taylor affidavit") stating, in effect, that numerous samples of prior art Aureomycin products had been found to contain 2 to 4% of tetracycline. The affidavit further stated that pure tetracycline had been separated from a sample of commercial Aureomycin. (536a, 5314a-20a)

January 11, 1955

The Patent Office issued the Conover tetracycline patent (U. S. Patent No. 2,699,054) to Pfizer. After issuance of the patent, the Conover patent file became available to the public. (497a, 535a, 5015a-17a)

January 11, 1955

On the same day that it received the patent, Pfizer brought infringement suits against Bristol, Squibb and Upjohn. (537a)

January 11, 1955

Cyanamid became licensed by Pfizer under the Conover patent upon its issuance, pursuant to the parties' agreement of January 11, 1954. (6321a ff.)

January 13, 1955

The agreement between Cyanamid and Bristol settling the patent infringement suit between the parties was formally executed. Pursuant to this agreement Bristol was licensed under Cyanamid's patents to produce up to 6 per cent chlortetracycline in the production of tetracycline and to sell tetracycline containing not more than 6 per cent chlortetracycline. (497a, 514a, 6376a ff.)

January 14, 1955

After hearing for the first time of issuance of the Conover patent, Cyanamid's patent counsel Edelblute went to Washington to review the Conover patent file which then became available for public inspection. Edelblute inspected the file and wrote a memorandum on January 14, 1955 to officials of Cyanamid in which he reviewed the *ex parte* proceedings leading to the issuance of the patent. Edelblute stated that "Conover did not deny that small amounts of tetracycline were present in the fermentation broths" and that "His whole case was based upon the proposition that Duggar and Neidercorn (sic) did not disclose the presence of tetracycline, and in fact, their broths were so weak in this antibiotic that no *useful* amount of the material was present or could be recoverable therefrom." (Emphasis in original.) Edelblute also stated that he failed "to find any evidence of deliberate concealment or falsification of facts or the misapplication of fallacious or legally unsound arguments," and that "the Examiner did not appear to take the unrealistic point of view that the mere presence of a few molecules of tetracycline wherever they might be, whether in the field or in Duggar's fermentors, would be sufficient to prevent an inventor from obtaining a patent on a meritorious invention." He concluded by stating his opinion that the Conover patent "would be held valid in a skillfully-conducted litigation before a fair-minded judge who appreciates the objectives and value of the United States Patent System". (2558a-63a, 9150a-52a)

May 25, 1955

Edelblute filed papers in prosecution of Cyanamid's Minieri fermentation process claims in which he stated

that recent investigations were made by Cyanamid of the Duggar fermentation using various strains of *S. aureofaciens* and it was found that under certain conditions and when using some strains of *S. aureofaciens* small amounts of tetracycline had been produced. Edelblute also stated that reinvestigation of samples of commercial Aureomycin showed from 1 to 2½ per cent tetracycline as against chlortetracycline. (604a, 5238a-39a)

September 27, 1955

Edelblute filed papers in Cyanamid's Martin-Bohonos' application in which he stated that small amounts of tetracycline were formed in the processes of Duggar and Niedercorn. (5963a-64a)

December 14, 15, 1955

The parties to the Pfizer infringement suits against Bristol, Squibb and Upjohn agreed in principle to a settlement of the suits (formalized in writing on March 28, 1956) under which Pfizer agreed to license Bristol, Squibb and Upjohn for a royalty of 3½ per cent of net sales of tetracycline. (540a-41a)

February 7, 1956

The Patent Office issued Cyanamid the Minieri patent (U. S. Patent No. 2,734,018) on fermentation process claims for the production of tetracycline. (10481a)

November 15, 1965.

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APPENDIX C

Antitrust Cases in which Walker Process Equipment, Inc. v. Food Machinery and Chemical Corp., 382 U.S. 172, 86 S.Ct. 347, 15 L.Ed. 2d 247 (1965) was applied but no fraud was found.

Becton, Dickinson and Co. v. Sherwood Medical Ind., Inc., 516 F. 2d 514 (5th Cir. 1975); No fraud found.

Bendix Corp. v. Balax, 417 F.2d 149 (7th Cir. 1972); No fraud found.

Cataphote Corp. v. DeSoto Chem. Coatings, Inc., 450 F. 2d 769 (9th Cir. 1971); No fraud found.

Bendix Corp. v. Balax, Inc., 421 F. 2d 809 (7th Cir. 1970); No fraud found.

Dunkin, Inc. v. Royal Tops Manufacturing Co., 381 F. 2d 879 (7th Cir. 1967); No fraud found.

Carter v. Rice, 398 F. Supp. 474 (N.D. Texas 1975); No fraud found.

Norton Co. v. Carborundum Co., 397 F. Supp. 639 (D. Mass. 1975); No fraud found.

Alphin v. Henson, 392 F. Supp. 813 (D. Md. 1975); No fraud found.

Forbro Design Corp. v. Raytheon Co., 390 F. Supp. 794 (D. Mass. 1975); No fraud found.

Jack Winter, Inc. v. Koratron Co., Inc., 375 F. Supp. 1 (N.D. Cal. 1974); No fraud found.

Azoplate Corp. v. Silverlith, Inc., 367 F. Supp. 711 (D. Del. 1973); No fraud

found.

Mueller Brass Co. v. Reading Industries, Inc., 352 F. Supp. 1357 (E.D. Pa. 1972); No fraud found.

In Re Western Liquid Asphalt Cases, 350 F. Supp. 1341 (E.D. Pa. 1972); No fraud found.

Udin v. J. Kaufman Iron Works, Inc., 342 F. Supp. 1090 (S.D. N.Y. 1972); No fraud found.

Beckman Instruments, Inc. v. Chemtronics, Inc., 328 F. Supp. 1132 (W.D. Texas 1971); No fraud found.

S.C.M. Corp. v. Radio Corp. of America, 318 F. Supp. 433 (S.D. N.Y. 1970); No fraud found.

Brown v. Myerberg, 314 F. Supp. 939 (S.D. N.Y. 1970); No fraud found.

Kolene Corp. v. Motor City Metal Treating Inc., 307 F. Supp. 1251 (E.D. Mich. 1969); No fraud found.

Carter-Wallace, Inc. v. Riverton Labs, Inc., 304 F. Supp. 357 (S.D. N.Y. 1969); No fraud found.

Crown Machine & Tool Co. v. KVP-Sutherland Paper Co., 297 F. Supp. 542 (N.D. Cal. 1968); No fraud found.

Diamond International Corp. v. Walter-Hoefer, 289 F. Supp. 550 (D. Md. 1968); No fraud found.

Corning Glass Works v. Anchor Hocking

Glass Corp., 253 F. Supp. 461 (D. Del. 1966); No fraud found.

Antitrust Cases in which Walker Process was applied and fraud was found.

Acme Precision Prods., Inc. v. American Alloys Corp., 422 F. 2d 1395 (8th Cir. 1970); fraud found (lower court determination of knowledge held clearly erroneous). See, also, Acme Precision Prods., Inc. v. American Alloys Corp., 484 F. 2d 1237 (8th Cir. 1973).

APPENDIX H

H-1

IN THE

United States Court of Appeals

FOR THE FOURTH CIRCUIT

Docket No. 74-2154

THE STATE OF NORTH CAROLINA

Plaintiff-Appellant,

v.

CHAS. PFIZER & CO., INC., AMERICAN CYANAMID COMPANY and BRISTOL-MYERS COMPANY, OLIN MATHIESON CHEMICAL CORPORATION and THE UPJOHN COMPANY,

Defendants-Appellees.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NORTH CAROLINA, 384 F. SUPP. 265 (1974)

APPELLANT'S BRIEF

(CORRECTED COPY)

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UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

74-2154

The State of North Carolina,
Appellant,

vs.

Chas. Pfizer & Co., Inc.,
American Cyanamid Company,
Bristol-Myers Company,
Olin Mathieson Chemical Corp.,
and The Upjohn Company,
Appellees.

* *

STATEMENT OF QUESTIONS ON APPEAL TO BE PRESENTED BY PLAINTIFF-APPELLANT, TOGETHER WITH DESIGNATIONS OF TESTIMONY AND EXHIBITS TO BE INCLUDED IN THE JOINT APPENDIX.

* *

QUESTIONS ON APPEAL

1. Did the District Court err by denying Plaintiff's timely plea of collateral estoppel and motion for partial summary judgment based thereon; as to the issue of the method and manner by which defendants Pfizer and Cyanamid caused the Conover Patent (U. S. Patent No.

2,699,054) on the product tetracycline to issue to Pfizer, it having been previously finally adjudicated by the F.T.C. and affirmed by the United States Court of Appeals for the Sixth Circuit that ". . . Pfizer and Cyanamid made misrepresentations to Lidoff (the Patent Office Examiner) and withheld essential information from him, thereby deceiving him into granting a patent on tetracycline which otherwise would never have been approved." (401 F.2d 574, 578 (1968), cert. denied 394 U.S. 920 (1969)).

2. If Question 1 is answered negatively, did the District Court err in its conclusion, based principally upon the same evidence as the 6th Circuit case, that Pfizer and Cyanamid did not make misrepresentations to Lidoff and withhold essential information from him, thereby deceiving him into granting a patent on tetracycline which

otherwise would never have been issued, i.e., that the patent was not procured by fraud?

3. If the answer to either question 1 or 2 is affirmative, then did the District Court err in its conclusion that Pfizer alone or in combination with Cyanamid did not monopolize or attempt to monopolize the broad spectrum antibiotic market in violation of section 2 of the Sherman Act (15 U.S.C. Sec. 2)?

4. Did the District Court err in its conclusion that Pfizer and Cyanamid had not, by the end of November 1953, entered into a combination or conspiracy through contracts, agreements or understandings to restrain trade and commerce in the manufacture and the marketing of broad spectrum antibiotics in the United States in violation of section 1 of the Sherman Antitrust Act, (15 U.S.C. Sec.

1)?

5. Did the District Court err in its conclusion that Bristol, Squibb and Upjohn, during the late summer and early fall of 1954, did not enter into a combination or conspiracy by contracts, agreements or understandings to restrain trade and commerce in the manufacturing and the marketing of the broad spectrum antibiotic, tetracycline, in the United States in violation of section 1 of the Sherman Act (15 U.S.C. Sec. 1)?

6. Did the District Court err in its conclusion that Bristol, Squibb and Upjohn during the fall and winter of 1955-1956, did not enter through contracts, agreements or understandings the 1953 combination or conspiracy of Pfizer and Cyanamid to restrain trade and commerce in the manufacturing and marketing of broad spectrum antibiotics in the United States in violation of

sections 1 and 2 of the Sherman Act (15 U.S.C. Secs. 1 and 2)?

7. Was the District Court's Judgment of Dismissal induced by an erroneous view of the law and a misapprehension of the effect of circumstantial evidence since the court in making its findings and reaching its conclusions "deemed it significant that the federal government in the prior proceedings and the State of North Carolina in this case have failed to produce a single witness to give any direct evidence of the existence of a conspiracy.... who would be willing to come forward and pinpoint some wrongdoing on the part of at least one of the defendants" which error permeates every crucial, essential finding of fact made by the District Court?

8. Did the District Court err in holding that "...the evidence, regardless of how the words used by the

parties...["appreciable" "recoverable" and "clearly identifiable"]...are to be interpreted, falls short of establishing fraud, ...this court declines to enter this thicket of semasiological ambiguity."

9. Did the District Court err in its construction and application of the Sherman Act where it stated, for example, that:

> "...one may wonder if it is really in the public interest for competition to be maintained with such cutthroat intensity in a business such as the pharmaceutical industry as to result in a curtailment of research and development programs designed to produce new and more beneficial drug..."

an interpretation which is in contradiction with Congressional intent, and inconsistent with the entire evidence of record.

10. Were the District Court's "findings of fact" (many of which are mixed questions of law and fact) as set forth

APPENDIX I

is.

MR. OWENS: Conover CIP.

Q. On Exhibit CX-4," North Carolina 118, "What I believe should be page 8,-- A. There are so many numbers.

Q. I understand the problem. It's the claim part of the application. A. That is what I was looking for.

Q. Now you are past it. A. Here it is.

Q. Okay, page 8. Am I correct that the product claims are one through seven in that group of claims? A. One through six.

Q. I am sorry, one through six. Now, did you understand those claims to be equally as broad as the claims in the Heinemann file wrapper we just referred to? A. Now, do you mean equally as broad or co-extensive--

Q. Co-extensive perhaps is the term. A. --with the claims there.

Q. Let me ask the question this way. In your opinion would these claims read on

the product, in any environment, one through six? A. Yes. These claims will read on a [4|86] "product, in any environment, form, and so forth.

Q. In other words, would it be your opinion that these claims as they were phrased would have read, for example, on the Duggar Broth, if there had been any tetracycline in the Duggar Broth? A. Yes.

Q. Could you review the file wrapper to determine what claims were before you at the time you issued your rejection, ex parte rejection following the dissolution in Exhibit 4," North Carolina ||8, "the Conover CIP? A. The November 24, |954 rejection --

Q. Right. A. -- indicated the claims that were then being considered. Do you want the numbers of them?

Q. Yes, please. [4|87] "A. Apparently product claims one to six were being rejected; process claims seven, eight, and

nine were allowed.

Q. Are those the same products claimed one through six we just referred to? A. Yes.

Q. So I am sure I understand these matters, am I correct then that you felt that for purposes of novelty that a claim as broad as those claims were-- technically could never be novel if there was any of the product which existed in the prior art? A. Yes.

Q. As I understand it, the reason for that is because the claim as phrased did not exclude tetracycline as it might have existed in the prior art? A. Yes, or to phrase it different, the claim read upon the named material or compound in any environment.

Q. Now, let me refer you to your testimony so I can get another point clarified. Page ||530." Which refers to the PTC testimony. "Let me show you this

and I will read it into the record at the same time. Referring to your testimony which was given on Monday September 12, 1966, on page 1530, you were asked this question--I am going to start on the third line of that [4188] "question, unless there is an objection. 'In your handline the Pfizer Conover application for a patent on tetracycline, were you interested in establishing only that the prior art processes did or did not produce tetracycline in 'appreciable' amounts making possible its prior recovery as a therapeutic product?' And the answer, 'First of all I was not--I would not have been interested in recovering a therapeutic product. The claim was directed to a compound per se, not to a therapeutic product. So that my interest would have been identification of the material tetracycline as present.'

Now, with respect to this

statement here, is this again based on your understanding that the claim as phrased technically would have even covered any tetracycline that existed in small amounts in the prior art? A. Yes.

Q. And would I be correct that as to a claim which was phrased so as not to read on the prior art. that is to exclude the prior art, that in that case you would have been interested in the request of recovery of a therapeutic product? A. That claim was not before me.

Q. That claim, though-there are claims, as you probably are aware, of that nature which were included following this rejection. And the question I have--[4189] " Mr. Lidoff, do you need to see the claims to answer the question? Would it assist you? A. You are talking about the claims that are in the Conover patent--

Q. Yes."

THE COURT: All right, let's take

our morning recess and come back at 11:45.

(Recess taken.)

MR. LLOYD: I believe we are on page 76 of the transcript, you are about to give an answer.

BY MR. SILVERSTEIN:

"A. --added after we had decided we would allow the product claims, is that right?

Q. Right. A. Well, it might be best to see them, but I know pretty much what they say; what is your question?

Q. My question is referring back to this testimony-- A. Yes.

Q. --where you were emphasizing that with respect to a claim, as I understand it, that was broad and covers tetracycline in any environment, that you would not have been interested in recovering that therapeutic product. Am I correct that as to a claim that is limited [4|90] "to the use of tetracycline in a therapeutic product-- let me show you so there will be

no confusion. A. I just want to point out you are getting into a pretty hypothetical area which is not at issue here.

Q. Exhibit 3--do you have Exhibit 3, North Carolina Exhibit 1, C-3? Let me show you an example of claim 15 which reads, 'an antibiotic composition useful in treatment carries infections in animals. The antibiotic activity is due primarily to the tetracycline. Now first, would I be correct that that claim, as raised, would avoid the error of reading on the product in any environment? A. Now you realize you are going outside the records that were dealt with before. You are asking me a hypothetical question as a patent expert.

Q. Well, I admit, Mr. Lidoff, it seems to me that--inasmuch as such claims were before you-- A. I don't know if the counsel for the government wants me to answer that, or the patent office.

MR. OWENS: I think there is a

little bit of confusion, and maybe I can clear it up.

Are you making specific reference to claims that were added during the course of the Conover --CIP prosecution?

" [4|91] MR. COOPER: Yes.

MR. OWENS: The easiest thing to make it clear that this may not be hypothetical is if he can have the file wrapper before him and you can point out the one you are talking about.

THE WITNESS: I have that."

MR. LLOYD: And there follows a great deal of colloquy, and I think we can resume on page 75.

" [4|92] Q. Now I think the question that is outstanding is with respect to a claim such as claim fifteen which we have previously referred to, that being claim fifteen of the patent, would it be correct that your interest would have not been in whether there was any amount present in

prior art, but then whether there was an amount present in the prior art which would have, in effect, provided the therapeutic benefits of tetracycline? A. Now this requires a rather elaborate explanation -- that's why I hesitated to bring it in now because it's an explanation dealing in part with patent expertise, rather than rejections that were actually made in this case. These claims were added to the file after the rejection that I had made was overcome. After we had decided that tetracycline itself, the name tetracycline, was patentable. Now having decided that the broad concept of the compound in any environment was patentable, we then--and I say 'we,' because it was an interview involving Mr. Surle, as well as myself and Mr. Hutz, and I believe Mr. Murphy--we agreed, and I might say that I personally disagreed as to some of these claims--we agreed to permit claims of lesser scope

than the tetracycline claim itself, which claims of lesser scope, since they are different, would have the references applied to them in a different way. So we never were faced with the rejection that you are talking about, whether or not this type of claim would [4|93] "have been met by the broth of Duggar. We had already overcome--or Niedercorn--we had already overcome that rejection, so that the only discussion as to these claims, this type of claim, that you are talking about was whether or not we would permit it in the case, having already allowed broader claims. So presumably anything narrower in scope would automatically be allowable. I might point out also that some of these claims, and I think maybe fifteen is one of them, would probably not even have been examinable in our division if it occurred by itself. It's directed to a medicine that might well have been examined in the

medical division. So that I hesitated before to answer this question because we were not faced with the issue that you are talking about. However, and I will stress this, and maybe this answers your question, it's an entirely different issue of patentability than the one I was faced with. I was faced with patentability of the compound itself, which I read on the compound in any environment. Once you start limiting the compound, such as making it solid, crystalline, a therapeutic or some other limitation on it, then you go outside of the rejection that I had made and it would possibly be--well, it would be an entirely different issue.

Q. Well, now, with respect to those narrower claims, I am correct, am I not, that they did avoid [4|94] "the basis of the rejection which you had in mind? A. Obviously, yes. Since the broader claim had at that already avoided the rejection,

the narrower claims must necessarily have avoided the rejection.

Q. But let us assume that Mr. Hutz and Dr. Murphy had clearly understood that you wanted to know whether there was any tetracycline present and they had advised you that based upon tests or work done they had concluded that there were very small amounts of tetracycline, two, three, four percent, present in broths, and they had advised you that those small amounts also might have been present in the commercial product, and they had further advised you that those small amounts could not provide the end product with any of the therapeutic benefit of tetracycline. And I guess my question is: Under those circumstances would you have considered the narrower claims allowable?"

MR. LLOYD: Then we get into colloquy here. We are now on page 84, and

APPENDIX J

PETITIONER'S EXHIBITS SHOWING EXCHANGE OF PRICE INFORMATION BETWEEN RESPONDENTS.

Shortly before the tetracycline patent infringement suit was settled, Cyanamid's Director of Sales wrote the following letter to Bristol's Director of Sales:

11/22/55.

Dear Dick:

I am enclosing the most recent prices on all of our Achromycin (Cyanamid's trade mark for tetracycline) prices, together with what we call a Trade Class chart. This Trade Class chart is our standard procedure for classifying accounts for our Lederle Purchase Plan and our handling charge policy.

Our branches are instructed to follow this chart with great precision. Basically, except for the subject of our discussion Friday afternoon, there are no deviations. I might say that the branch offices do not report to the Sales Department but rather to the Treasurer's Office, so that the opportunity for special situations is non-existent.

Our Dominion price for 250 mg. has been and will continue to be $17.01. This price applies to the Department of Defense Production and the Department of Veterans Affairs. Our price to the Canadian Provincial Department is $25.50.

The name of the hospital survey group is Davee, Koehnlein & Keating at One North LaSalle Street, Chicago, Illinois.

Sincerely,

(PLX 255)

Of even greater significance than the aforementioned memoranda are letters written by Squibb and Upjohn concerning an order obtained by Squibb from Los Angeles County Hospital. On April 27, 1955, Heberger wrote:

> I was disturbed to learn that we were the successful bidder to Los Angeles County because we bid on Tetracycline 250 Mg. capsules $22.49 per 100, less 2% discount. It is nice to get a Steclin order finally from Los Angeles County *but I have my fingers crossed, anticipating certain reactions to what we did, which may not be good.* (Emphasis added.) (PLX 375).

On April 6, 1955, Upjohn's Los Angeles, California branch manager wrote to Upjohn's Price Determination Department Manager, as follows:

> As requested, we are enclosing the results of the bids at Los Angeles County Hospital:
> 864 Tetracycline Caps. 250 Mg. went as follows:
>
> Pfizer ..... $22.49, 2% 15th proximo
> Squibb ..... 22.49, 2% open
> Lederle ..... 22.49 net
> Bristol ..... 22.49, net
>
> Homer Hammond feels Squibb will get the bid with an open 2% time limit***.
>
> * * * *
>
> We will forget that one. On the Panmycin it looks like Squibb scuttled our ship. *I wonder if Bristol will complain to them as they did with us.* (Emphasis added.) (PLX 507).

On May 27, 1954, the Cyanamid Chicago Regional Manager sent the following message to his sales manager:

> *Apparently Pfizer and Roerig* (a sales division of Pfizer) *are abiding by reduction of samples* because the number of calls from all reports from the field since my return from Absecon, have been practically none. (Emphasis added.) (PLX 560)

And, on June 17, 1954, he wrote:

> Within the last thirty days, complaints from the field regarding the Pfizer and Roerig operations have been practically nil. From all indications, it is presumed that these competitors *are adhering to the operation that was reported by Mr. Wendt* (Cyanamid's Director of Sales) at the Regional Manager's Meeting. (Emphasis added.) (PLX 247)

About one year later the same Cyanamid representative made the following comment with respect to the furnishing of free tetracycline to Michael Reese Hospital, Chicago, Illinois:

> Approximately *one year ago,* we were furnishing this same institution material for clinic use through Dr. Kagan, Chief of Pediatrics. *This procedure was stopped due to a report by Pfizer to Mr. Wendt.* (Emphasis added.) PLX 253)

The record also shows that in March 1955, shortly before a fourteen month period of noncompetitive bidding to the Veterans Administration, a Cyanamid representative reported that Pfizer was undercutting Cyanamid and "everybody" on bid prices to certain CCS hospitals. He then stated in the report that "This should be checked into and *prices arranged* as we have done on the VA setup." (Emphasis added.) (PLX 268)

Another Cyanamid representative stated on July 30, 1955:

> If Pfizer is trying to hold the price line, would it be helpful to collect some copies of bids showing the low-cut bids by Pfizer's accounts so that Pearl River (Cyanamid) could show them to the Pfizer officials? (PLX 553)

Then in November 1954, after the dissolution of the second interference-Upjohn, Bristol's customer, sent Cyanamid its "domestic catalog".

November 29, 1954.

A Domestic Catalog was mailed today to:
Lederle Laboratories Div.,
American Cyanamid Co.,
Att: Mr. Robert S. Andrews,
International Sales Education,
30 Rockefeller Plaza,
New York 20, N.Y.

Will you please add the above to your mailing list, to receive new and replacement pages as they are issued.

(PLX 446)

Again in June of 1955, in the midst of Pfizer's struggle to oust Bristol, Squibb and Upjohn from any role in the tetracycline market, H.H. Kibbe, Manager of the Pfizer "Pricing Department" wrote to his counterpart at the Upjohn Company:

Under separate cover, we are sending you a copy of the new Pfizer Laboratories loose-leaf Price Schedule. When new products are added to our line, you will receive supplemental price pages in the form of "Pfizer Scripts", a new series of price and product information folders. These pages, when inserted in the proper sequence as indicated, will keep your price list up to date.

We would like you to mail a copy of your current catalog to the writer's attention and will appreciate your placing your name on our mailing list for new product and price change information.

Thank you for your prompt attention.

H.H. Kibbe.

(PLX 447)

The reply from Upjohn was as follows:

June 9, 1955

Thank you very much for sending us a copy of the new Pfizer Laboratories loose-leaf price schedule. We will also look forward to receiving the 'Pfizer Scripts' and will see that they are inserted promptly to keep your price list up to date: Information folders should be directed to my attention.

We have mailed you a copy of the Upjohn catalog, and your name has been placed on our mailing list so that you will receive reprinted pages as they are prepared.

(PLX 448)

Then on January 18, 1956, Bristol's Sales Service Department wrote to Upjohn as follows:

Thank you very much for your prompt attention and reply to my letter of January 13th. In regard to your mailing list concerning Bristol Laboratories, Inc., you may remove Mr. W.A. Owen's name from the list. Mr. Owen is no longer connected with the Sales Department. We will appreciate your listing

Bristol Laboratories, Inc.
630 Fifth Avenue
New York, New York

and

Bristol Laboratories, Inc.
Sales Service Department
P.O. Box 657
Syracuse, New York

for additional information which you may distribute in the future.

Two (2) Bristol Therapeutic Manuals will be sent to Mr. H.E. Shepard promptly and we have added Mr. Shepard's name to our mailing list.

Two (2) new pages for the Therapeutic Manual have been issued since June 1955. I have asked that these be mailed to your attention.

(PLX 449)

In 1957, Mr. Kibbe of Pfizer, once more contacted Mr. Shepard of Upjohn to insure that both firms had an up to the minute knowledge of each others pricing practices.

Pfizer Laboratories,
July 24, 1957.

Under separate cover we are sending you a complete new set of price pages for your Pfizer Laboratories loose-leaf catalog. Kindly remove all pages from your present cover and insert this refill.

When new products are added to your line, you will receive announcements in the form of "Pfizer Scripts", a new series of price and product information folders. These pages when inserted in the proper sequence will keep your copy of our price list up to date.

Thank you for your cooperation.

(PLX 451)